



PACIFIC PULP & PAPER INDUSTRY

# CHLORINE



The great forests of the Pacific Northwest are supplying raw material for the finest bleached pulp.

An adequate supply of LIQUID CHLORINE adjacent to the forests is essential for bleaching operations.

The location of our TACOMA PLANT provides this convenient source of supply.

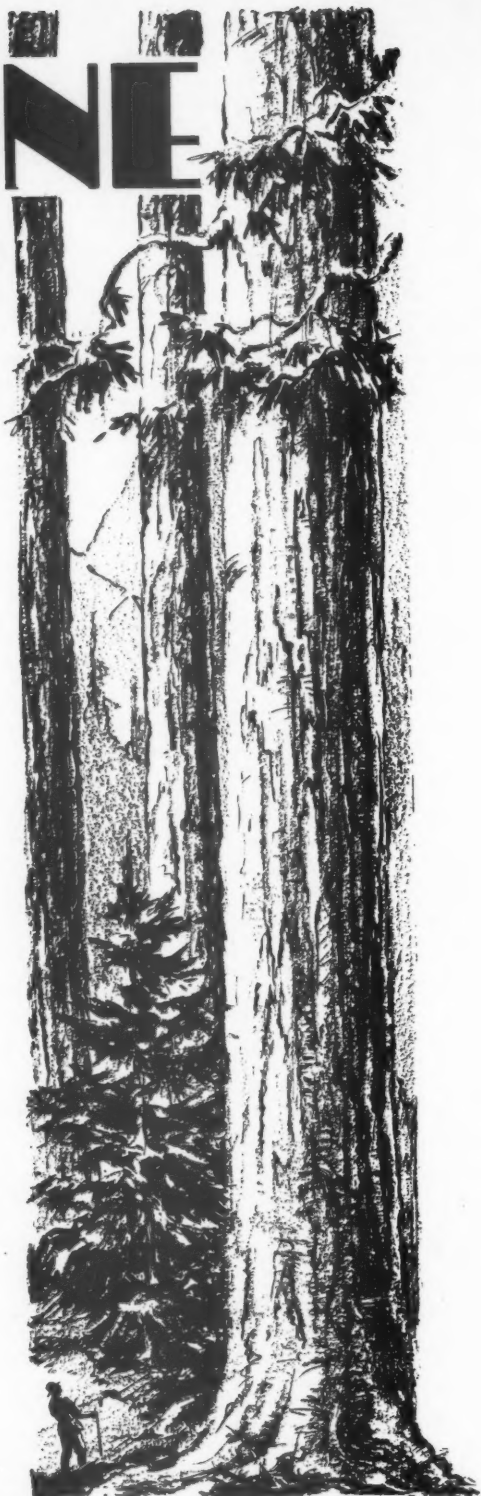
## CHEMICALS for the PULP INDUSTRY

CHLORINE CAUSTIC SODA

PERCHLORON  
(High Test Hypochlorite)

BLEACHING POWDER  
(Standard Strength)

ANHYDROUS AMMONIA



PHILADELPHIA, PENNSYLVANIA

TACOMA, WASHINGTON

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# PULPWOOD RESOURCES OF WESTERN WASHINGTON AND WESTERN OREGON

United States Forest Service Completes Physical Inventory Showing  
Species and Types of Ownership

Pulp woods in western Washington and western Oregon, between the summit of the Cascades and the Pacific Ocean, 16 inches and up diameter, breast height, total approximately 170,000,000,000 board feet, Scribner rule. The hemlocks, with a round 110,000,000,000 feet, lead in volume and are followed by silver fir with around 33,000,000,000 feet.

These figures are taken from the survey of the nation's forest resources authorized by Congress in 1928, the field work on which was begun in 1930 in western Oregon and western Washington. Later on pulp woods of other Pacific Coast districts will be surveyed and the totals made available, as well as similar figures for all regions in the United States.

The inventory work is being carried on by the United States Forest Service, the survey in the region under discussion being conducted by the Pacific Northwest Forest Experiment Station, Portland.

The scope of this project is fourfold in its major aspects: (1) the existing forest resources by timber volume and type area; (2) the depletion of the nation's forests by

logging and through loss by fire, insects, disease, and other causes; (3) the amount and rate of current and potential growth on all forest land; (4) the present and prospective requirements of the country for forest products. It finally involves the correlation and critical analysis of the interrelation of these data and other economic data and trends with the ultimate objective of making available to public and private agencies the basic facts necessary to formulate and execute rational plans, national, regional or local in character, for the best use of the forest land.

The comprehensive methods used in this survey make available detailed information in both map and statistical form regarding the forest resources. The tables appended showing the stand of pulp woods by species, by major classes of ownership by counties, is merely one of the breakdowns possible. The Pacific Northwest Forest Experiment Station has prepared a set of statistics consisting of five tables and three graphs and containing the condensed basic facts relating to timber volumes and type areas for

each of the 38 counties in the region and a limited mimeographed edition is being distributed.

For forest units consisting of two or more counties additional statistics and textual analyses of the inventory, of growth and of depletion, will be prepared later and published as soon as possible. For example, data is being worked up which will also show the volume of pulp wood in young stands of from 6 to 18 inches in diameter. In addition to the statistical data, forest type maps, at several different scales, showing type of the forest cover, either have been or are being prepared. These maps consist of 1/2-inch to the mile generalized type maps of each county and 1-inch to the mile detailed type maps of each county and national forests in the region. The 1/2-inch maps have been completed; the others are in course of preparation.

These maps are hand colored and consequently are not available for public distribution, but may be consulted or copied at the Pacific Northwest Forest Experiment Station in Portland. At a later date, probably within a year, colored type maps, scale 1/4-inch to the mile, will be

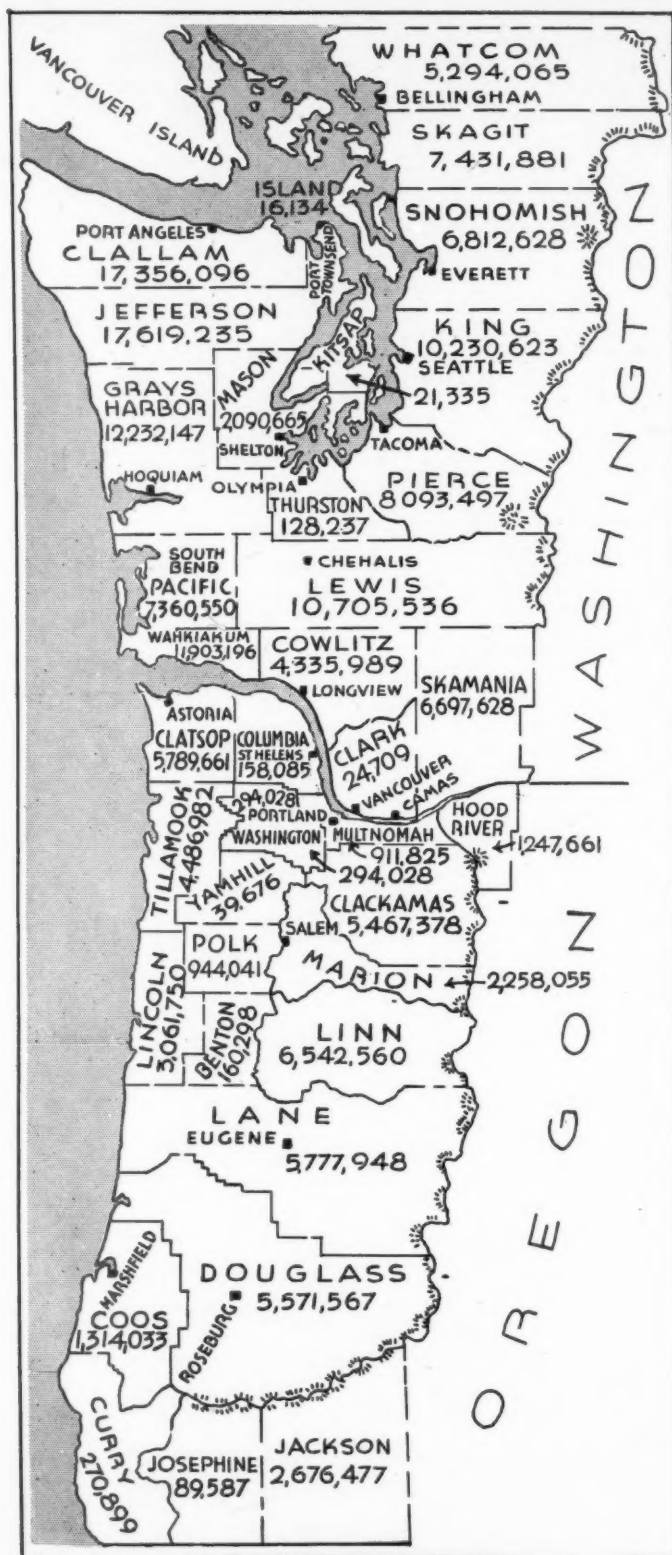
## VOLUME BY SPECIES FOR ALL OWNERSHIPS IN WESTERN WASHINGTON AND WESTERN OREGON

In Thousands of Board Feet, Log Scale, Scribner Rule

Species	Oregon	Washington	Total
Sitka Spruce .....	4,956,880	6,728,891	11,685,771
Engelman Spruce .....	188,995	34,009	223,004
Western Hemlock .....	24,587,190	79,837,653	104,424,843
Mountain Hemlock .....	3,996,937	1,386,822	5,383,759
White Fir .....	5,518,087	865,340	6,383,427
Noble and Shasta Fir .....	5,917,376	2,759,206	8,676,582
Silver Fir .....	3,041,251	29,789,607	32,830,858
Alpine Fir .....	65,441	33,516	98,957
Black Cottonwood .....	106,659	143,126	249,785
<b>Totals .....</b>	<b>48,378,816</b>	<b>121,578,170</b>	<b>169,956,986</b>



## PACIFIC PULP & PAPER INDUSTRY



The map shows the counties of western Washington and western Oregon covered in the accompanying article. Locations of some of the major pulp and paper-making centers are indicated. The figures shown in each county give the total volume of pulpwood species in thousands of board feet within its borders.

lithographed and made available for public distribution.

The collection of this data, in such complete form, will make possible more exact information on pulp wood resources than has ever been possible. It will be practical to obtain not only the total of the species in any desired area, but the type of mixture, a good idea of the age of the stand, and knowledge of the ownership. This information, in connection with available data on water supplies and rail and water transportation, will be of tremendous aid in properly locating pulp and paper mills upon the Pacific Coast.

Washington leads in the totals of pulp woods, but is far behind Oregon in the matter of Douglas fir. Washington has nearly 80,000,000,000 feet of western hemlock, about 7,000,000,000 feet of Sitka spruce and over 33,000,000,000 feet of the balsam fir; compared to 24,000,000,000 feet of western hemlock, 5,000,000,000 feet of Sitka spruce and 14,000,000,000 feet of the balsam firs in Oregon.

A study of the counties reveals that the Columbia River, Coos Bay, Grays Harbor, Willapa Harbor, and Puget Sound districts, all with excellent rail and deep water facilities, and with substantial supplies of pulp woods, offer natural advantages and will undoubtedly be taken advantage of in the next few years, either through the expansion of existing plants, or through the construction of new plants by eastern firms.

In Washington, Clallam County is the leading hemlock county, followed closely by its neighbor Jefferson County. Over 70 per cent of the Sitka spruce in the state is found in Clallam, Jefferson and Grays Harbor counties. Of the total stand of 244,819,196,000 feet of all species of wood in western Washington, slightly more than 50 per cent is privately owned; 35 per cent is in National Forest ownership; slightly less than 10 per cent is owned by the state of Washington, while the balance is on Indian reservations and in miscellaneous public ownerships.

The total of coniferous timber of all types over 20-inches DBH is 541,000,000,000 feet, covering about 14,500,000 acres, a coniferous stand of 37,000 feet per acre for the region as a whole. The total area covered by the survey is 35,000,000 acres, of which 80 per cent is classified as forest land; Oregon 55 per cent, Washington 45 per cent. Washington, with nearly 244,000,000,000 feet of conifers, on 5,827,317



acres, has an approximate stand per acre of 40,000 feet; while Oregon, with about 298,000,000,000 feet on 8,700,493 acres, has an average stand per acre of about 34,000 feet. The area of small second growth coniferous types is nearly equal for the two states, each having about 3,500,000 acres. Slightly less than 85 per cent of the total area of western Washington is classed a forest land. This totals about 13,500,000 acres. Of this 13 per cent is not suitable

for commercial conifers, leaving 11,649,042 acres suitable for softwood reproduction.

The accompanying table shows site classification of this land.

#### Coniferous Land Classification in Western Washington

Site I	320,292 acres	2.8 per cent
Site II	3,794,999 "	32.6 "
Site III	4,542,091 "	39.0 "
St. IV	2,567,905 "	22.0 "
Site V	423,755 "	3.6 "

Data will shortly be available on rate of growth in young timber, information which will be especially valuable in estimating the productivity of pulp wood on lands of the various site classification and in the mixture of species. Natural regeneration studies will also shortly reveal much of interest; particularly because of the relatively heavy reproduction of hemlock and the white firs in some areas which had a heavy stand of Douglas fir.

#### PULP WOOD RESOURCES OF WESTERN WASHINGTON BY COUNTIES

Volume in Thousands of Board Feet, Log Scale, Scribner Rule  
By Species, 16 Inches and Up D. B. H. (Diameter Breast Height)

CLALLAM COUNTY—Species				
	Private	State	Federal	Total
Sitka Spruce	1,207,645	149,891	322,637	1,680,173
Western Hemlock	6,101,857	1,088,892	5,483,423	12,674,172
Mountain Hemlock			109,364	109,364
White Firs	469		9,316	9,785
Silver Fir	851,364	155,099	1,881,920	2,888,383
Black Cottonwood	139	19	62	220
Totals	8,161,474	1,393,901	7,806,722	17,356,096
CLARK COUNTY				
Western Hemlock	4,805	451		5,256
White Firs	3,058			3,058
Noble Fir	3,950	420		4,370
Silver Fir	5,925			5,925
Black Cottonwood	6,018	82		6,100
Totals	23,756	953		24,709
COWLITZ COUNTY				
Sitka Spruce	4,710	740	60	5,510
Western Hemlock	2,049,005	491,966	174,092	2,715,063
Noble Fir	199,679	88,747	74,840	363,266
Silver Fir	816,315	207,542	214,637	1,238,494
Black Cottonwood	10,833	2,141	682	13,656
Totals	3,080,542	791,136	464,311	4,335,989
GRAYS HARBOR COUNTY				
Sitka Spruce	934,974	68,245	556,316	1,559,535
Western Hemlock	4,831,869	363,145	3,682,485	8,877,499
Mountain Hemlock			13,799	13,799
White Firs	1,383	3,070	903	5,356
Noble Fir	6,795			6,795
Silver Fir	118,859	22,042	1,619,080	1,759,981
Black Cottonwood	5,188		3,994	9,182
Totals	5,899,068	456,502	5,876,577	12,232,147
ISLAND COUNTY—Species				
Sitka Spruce	1,549	80		1,629
Western Hemlock	6,395	592	62	5,719
White Firs	7,753	908	125	8,786
Totals	15,697	1,580	187	16,134

## PACIFIC PULP &amp; PAPER INDUSTRY

JEFFERSON COUNTY—Species		Private	State	Federal	Total
Sitka Spruce	498,907	393,316	741,577	1,633,800	
Western Hemlock	2,346,217	2,817,458	5,365,078	10,528,753	
Mountain Hemlock			75,242	75,242	
White Firs			8,321	8,321	
Silver Fir	268,637	1,878,014	3,221,641	5,368,292	
Black Cottonwood	1,109	492	3,226	4,827	
Totals	3,114,870	5,089,280	9,415,085	17,619,235	
KING COUNTY					
Sitka Spruce	56,464	5,562	855	67,844	
Western Hemlock	3,966,171	419,729	1,845,331	6,231,231	
Mountain Hemlock	143,716	3,660	109,759	257,135	
White Firs	1,050			1,050	
Noble Fir	135,063	360	257,998	393,421	
Silver Fir	1,773,366	107,543	1,373,714	3,254,623	
Alpine Fir	7,935		10,539	18,474	
Black Cottonwood	6,697	38	110	6,845	
Totals	6,090,462	536,892	3,598,306	10,230,623	
KITSAP COUNTY					
Sitka Spruce	225			225	
Western Hemlock	20,642	94	75	20,811	
Silver Fir	275	24		299	
Totals	21,142	118	75	21,335	
LEWIS COUNTY					
Sitka Spruce	63,898	2,622	2,193	69,538	
Western Hemlock	3,762,008	737,160	2,434,875	6,934,043	
Mountain Hemlock	156		199,519	199,675	
White Firs	260,725	25,942	2,989	289,656	
Noble Fir	345,283	79,695	364,372	789,350	
Silver Fir	273,014	188	2,136,554	2,409,756	
Alpine Fir			4,140	4,140	
Black Cottonwood	6,610	50	2,718	9,378	
Totals	4,711,694	845,657	5,147,360	10,705,536	
MASON COUNTY					
Sitka Spruce	1,276			1,276	
Western Hemlock	76,066	16,461	1,532,471	1,624,998	
Mountain Hemlock			8,919	8,919	
White Firs			1,039	1,039	
Silver Fir	1,157		451,931	453,088	
Black Cottonwood	277		1,068	1,345	
Totals	78,776	16,461	1,995,428	2,090,665	
PACIFIC COUNTY					
Sitka Spruce	1,119,576	87,570	6,189	1,213,335	
Western Hemlock	5,106,405	514,308	25,758	5,620,713	
White Firs	341,864	6,525	475	348,864	
Noble Fir	14,688			14,688	
Silver Fir	130,276	32,674		162,950	
Totals	6,712,809	641,077	32,422	7,360,550	
PIERCE COUNTY					
Sitka Spruce	96,395	6,098	2,740	105,233	
Western Hemlock	2,759,657	344,597	2,399,392	5,503,646	
Mountain Hemlock	2,625		34,015	23,008	
White Firs	15,348	6,092	758	23,008	
Noble Fir	203,876	1,584	352,193	557,653	
Silver Fir	456,789	67,448	1,319,650	1,843,877	
Alpine Fir			6,640	6,640	
Black Cottonwood	13,298	308	3,194	16,800	
Totals	3,547,988	426,127	3,118,582	8,093,497	

## PACIFIC PULP &amp; PAPER INDUSTRY

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SAN JUAN COUNTY —Species	Private	State	Federal	Total
Western Hemlock .....	648	-----	-----	648
White Firs .....	680	-----	-----	680
Totals .....	1,328	-----	-----	1,328
SKAGIT COUNTY				
Sitka Spruce .....	17,667	23	-----	18,236
Western Hemlock .....	2,558,287	421,371	1,759,731	4,739,389
Mountain Hemlock .....	570	69	37,227	37,866
White Firs .....	2,648	88	3,551	6,287
Silver Fir .....	1,055,759	154,019	1,387,699	2,597,677
Alpine Fir .....	3,519	-----	-----	3,519
Black Cottonwood .....	27,177	1,391	339	28,907
Totals .....	3,665,627	576,961	3,188,547	7,431,881
SKAMANIA COUNTY				
Sitka Spruce .....	5	3,010	32,525	35,540
Western Hemlock .....	377,910	53,711	3,167,383	3,601,004
Mountain Hemlock .....	6,835	-----	73,453	80,288
White Firs .....	30,901	12,082	92,676	135,659
Noble Fir .....	76,065	10,962	502,353	589,380
Silver Fir .....	254,067	5,280	1,991,411	2,250,758
Alpine Fir .....	-----	-----	20	20
Black Cottonwood .....	2,962	303	1,714	4,979
Totals .....	748,745	853,480	5,861,535	6,697,628
SNOHOMISH COUNTY				
Sitka Spruce .....	41,930	5,129	6,978	54,037
Western Hemlock .....	2,032,043	687,919	3,485,236	6,205,198
Mountain Hemlock .....	28,050	17,116	487,914	532,080
White Firs .....	1,496	47	7,780	9,223
Noble Fir .....	377	-----	492	869
Alpine Fir .....	-----	-----	622	622
Black Cottonwood .....	6,594	250	3,755	10,599
Totals .....	2,110,490	710,461	3,992,777	6,812,628
THURSTON COUNTY				
Sitka Spruce .....	1,311	-----	-----	1,311
Western Hemlock .....	114,903	1,222	810	116,935
White Firs .....	4,557	209	-----	4,766
Noble Fir .....	2,363	-----	-----	2,363
Silver Fir .....	778	-----	-----	778
Black Cottonwood .....	1,947	135	2	2,084
Totals .....	125,859	1,566	812	128,237
WAHKIAKUM COUNTY				
Sitka Spruce .....	205,265	48,959	260	254,484
Western Hemlock .....	969,141	259,256	7,622	1,236,019
Noble Fir .....	36,659	392	-----	37,051
Silver Fir .....	255,611	78,723	-----	334,334
Black Cottonwood .....	3,404	845	304	4,257
Totals .....	1,598,317	388,175	8,186	1,903,196
WHATCOM COUNTY				
Sitka Spruce .....	5,211	2,061	33,364	40,636
Western Hemlock .....	1,180,641	365,051	1,623,776	3,169,468
Mountain Hemlock .....	746	-----	35,068	35,814
White Firs .....	350	-----	9,452	9,802
Silver Fir .....	376,116	124,508	1,513,673	2,014,297
Alpine Fir .....	50	51	-----	101
Black Cottonwood .....	5,112	196	18,639	23,947
Totals .....	1,568,226	491,867	3,233,972	5,294,065



PACIFIC PULP & PAPER INDUSTRY  
PULP WOOD RESOURCES OF WESTERN OREGON BY COUNTIES  
Volume in Thousands of Board Feet, Log Scale, Scribner Rule  
By Species, 16 Inches and Up, D. B. H.

<b>BENTON COUNTY—Species</b>				
	Private	State	Federal	Total
Western Hemlock .....	5,502	71	41,435	47,508
White Firs .....	87,861	560	23,869	111,290
Black Cottonwood .....	1,500			1,500
<b>Totals .....</b>	<b>94,863</b>	<b>631</b>	<b>65,304</b>	<b>160,298</b>
<b>CLACKAMAS COUNTY</b>				
Sitka Spruce .....			15,769	15,769
Western Hemlock .....	576,842	18,635	2,714,262	3,309,739
Mountain Hemlock .....			446,321	446,321
White Firs .....	2,376		34,829	37,205
Noble Fir .....	235,757	275	909,871	1,145,903
Silver Fir .....	6,254		464,496	470,750
Alpine Fir .....			28,740	28,740
Black Cottonwood .....	12,951			12,951
<b>Totals .....</b>	<b>834,180</b>	<b>18,910</b>	<b>4,614,288</b>	<b>5,467,378</b>
<b>CLATSOP COUNTY</b>				
Sitka Spruce .....	1,200,076	37,305	558	1,237,939
Western Hemlock .....	3,713,983	81,473	10,644	3,816,100
White Firs .....	19,378			19,378
Noble Fir .....	18,691			18,691
Silver Fir .....	670,248	21,577	5,728	697,553
<b>Totals .....</b>	<b>5,622,376</b>	<b>140,355</b>	<b>16,930</b>	<b>5,789,661</b>
<b>COLUMBIA COUNTY</b>				
Western Hemlock .....	122,434	85	950	123,469
White Firs .....	11,758			11,758
Silver Fir .....	3,198			3,198
Black Cottonwood .....	15,360	4,300		19,660
<b>Totals .....</b>	<b>152,750</b>	<b>4,385</b>	<b>950</b>	<b>158,085</b>
<b>COOS COUNTY</b>				
Sitka Spruce .....	116,829	40	641	117,510
Western Hemlock .....	568,501	6,941	229,361	804,803
White Firs .....	187,012	5,961	198,237	391,210
Black Cottonwood .....	510			510
<b>Totals .....</b>	<b>872,852</b>	<b>12,942</b>	<b>428,239</b>	<b>1,314,033</b>
<b>CURRY COUNTY</b>				
Sitka Spruce .....	38,776	201	1,701	40,678
Western Hemlock .....	37,479	729	3,500	41,708
White Firs .....	182,675	2,948	2,490	188,113
Black Cottonwood .....	400			400
<b>Totals .....</b>	<b>259,330</b>	<b>3,878</b>	<b>7,691</b>	<b>270,899</b>
<b>DOUGLAS COUNTY</b>				
Sitka Spruce .....	1,156,340	240	23,301	1,179,881
Western Hemlock .....	258,160	7,556	771,514	1,037,230
Mountain Hemlock .....			819,743	819,743
White Firs .....	192,399	7,434	1,200,128	1,399,961
Noble and Shasta Fir .....			1,033,192	1,033,192
Silver Fir .....	7		101,161	101,168
Alpine Fir .....			122	122
Black Cottonwood .....	270			270
<b>Totals .....</b>	<b>1,607,176</b>	<b>15,230</b>	<b>3,949,161</b>	<b>5,571,567</b>

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HOOD RIVER COUNTY—Species	Private	State	Federal	Total
Englemann Spruce .....	16	-----	114,805	114,821
Western Hemlock .....	46,799	510	131,846	153,121
Mountain Hemlock .....	-----	-----	225,910	225,910
White Firs .....	27,519	1,435	158,967	187,921
Noble Fir .....	5,831	90	261,077	267,008
Silver Fir .....	14,731	1,040	265,169	280,940
Alpine Fir .....	-----	-----	9,629	9,629
Black Cottonwood .....	500	-----	7,811	8,311
Totals .....	95,396	3,075	1,175,214	1,247,661

## JACKSON COUNTY

Englemann Spruce .....	-----	-----	13,030	13,030
Western Hemlock .....	5,023	67	76,643	81,733
Mountain Hemlock .....	-----	-----	516	516
White Firs .....	574,633	10,134	1,992,651	2,577,418
Black Cottonwood .....	3,760	-----	20	3,780
Totals .....	583,416	10,201	2,082,860	2,676,477

## JOSEPHINE COUNTY

White Firs .....	5,295	2,085	7,460	14,840
Noble and Shasta Fir .....	3,300	620	70,552	74,472
Black Cottonwood .....	275	-----	-----	275
Totals .....	8,870	2,705	78,012	89,587

## LANE COUNTY

Sitka Spruce .....	61,543	533	82,962	145,038
Engelmann Spruce .....	-----	-----	1,953	1,953
Western Hemlock .....	871,127	2,886	2,519,399	2,519,399
Mountain Hemlock .....	18,960	1,253	2,024,285	2,044,498
White Firs .....	28,975	132	181,005	213,912
Noble Fir .....	500	-----	367,962	368,462
Silver Fir .....	48,419	445	418,803	467,667
Black Cottonwood .....	15,800	-----	1,219	17,019
Totals .....	1,045,324	5,249	5,602,837	5,777,948

## LINCOLN COUNTY

Sitka Spruce .....	856,034	12,379	248,080	1,116,493
Western Hemlock .....	1,284,360	26,965	439,892	1,751,117
White Firs .....	1,027	-----	-----	1,027
Noble Fir .....	59,132	347	120	59,599
Silver Fir .....	128,804	900	3,810	133,514
Totals .....	2,329,357	40,591	691,902	3,061,750

## LINN COUNTY

Engelmann Spruce .....	3,765	-----	28,934	32,699
Western Hemlock .....	2,744,266	5,370	2,019,820	4,769,456
Mountain Hemlock .....	-----	-----	199,662	199,662
White Firs .....	164,400	265	35,892	200,557
Noble Fir .....	246,284	1,150	658,365	905,799
Silver Fir .....	85,670	-----	319,120	404,790
Alpine Fir .....	-----	-----	17,676	17,676
Black Cottonwood .....	11,867	14	40	11,921
Totals .....	3,256,252	6,799	3,279,509	6,542,560

## PACIFIC PULP &amp; PAPER INDUSTRY

## MARION COUNTY

Species—	Private	State	Federal	Total
Engelmann Spruce .....			9,124	9,124
Western Hemlock .....	370,114		1,048,391	1,418,505
Mountain Hemlock .....			239,928	239,928
White Firs .....	516		7,767	8,283
Noble Fir .....	89,293		278,224	367,517
Silver Fir .....	2,030		190,913	192,943
Alpine Fir .....			9,074	9,074
Black Cottonwood .....	12,621		60	12,681
Totals .....	474,574		1,783,481	2,258,055

## MULTNOMAH COUNTY

Engelmann Spruce .....	75			75
Western Hemlock .....	57,271	15,894	467,421	540,591
Mountain Hemlock .....			20,359	20,359
White Firs .....			250	250
Noble Fir .....	8,489		127,723	136,212
Silver Fir .....	3,015		199,603	202,618
Black Cottonwood .....	11,700	20		11,720
Totals .....	80,550	15,914	815,356	911,825

## POLK COUNTY

Sitka Spruce .....	5,000			5,000
Western Hemlock .....	464,233	664	258,651	723,548
White Firs .....	27,527	106	11,605	39,238
Noble Fir .....	54,470	13	37,713	92,196
Silver Fir .....	79,097		4,088	83,185
Black Cottonwood .....	874			874
Totals .....	631,201	783	312,057	944,041

## TILLAMOOK COUNTY

Sitka Spruce .....	944,640	57,349	218,574	1,220,563
Western Hemlock .....	2,500,744	136,922	335,741	2,973,407
White Firs .....	1,290			1,290
Noble Fir .....	288,137	540	185	288,862
Silver Fir .....	2,860			2,860
Totals .....	3,737,671	194,811	554,500	4,486,982

## WASHINGTON COUNTY

Western Hemlock .....	229,381	5	735	230,121
White Firs .....	40,164	114	700	40,978
Noble Fir .....	21,864			21,864
Silver Fir .....			65	65
Black Cottonwood .....	1,000			1,000
Totals .....	292,409	119	1,500	294,028

## YAMHILL COUNTY

Sitka Spruce .....	264		1,038	1,302
Western Hemlock .....	10,798	52	6,979	17,819
White Firs .....	12,894	56	2,318	15,268
Noble Fir .....	1,500			1,500
Black Cottonwood .....	3,787			3,787
Totals .....	29,243	108	10,335	39,676



# MILL IMPROVEMENTS IN THE WESTERN INDUSTRY

Extensive Modernization Programs Carried Out by Pacific Coast Mills  
in the Last Year Maintain High Standard of the Industry

Although no new pulp and paper mills were built on the Pacific Coast during the past year, construction was by no means at a standstill, and numerous important changes and improvements were made by the western industry.

The only paper machine built and installed in the United States during 1933 was placed on the Pacific Coast in the Longview, Wash. plant of the Longview Fibre Co. Construction of the new unit was started in August with the erection of the building to house the No. 4 machine. The building itself is 238 feet long, 80 feet wide and of two floors, 16 feet from first to second, and 22 feet from the second floor to the steel roof trusses.

The new cylinder machine embodies numerous new features. It has no top felt, although equipped with the usual bottom felt. The dryer section has one drying cylinder 12 feet in diameter, weighing 50 tons, in addition to thirty-six 48-inch diameter dryers arranged in vertical stacks. Power is provided by a mechanical drive from a variable speed motor, through a variable speed line shaft and hypoid gear units. The machine is 155 inches wide at the wet end, with 133-inch trim.

Auxiliary equipment installed consisted of vacuum pumps, a pressure filter oiling system, vapor absorption system, pumps and stock agitators, beaters and Jordans.

## Changes at Camas

At Camas, Wash., the Crown Willamette Paper Co. made a number of interesting changes, particularly in the addition of suction presses to the paper machines, and circulating systems to the digesters.

Rubber covered suction press rolls were installed on six paper machines at Camas, the rolls ranging from 22 to 26 inches in diameter and 115½ to 136 inches in width.

A cooking liquor circulating system was installed in No. 10 digester,

and plans made for the installation of similar equipment on other cooking units in the mill.

At their Lebanon mill, the company increased the drying capacity of No. 3 machine by the addition of ten 36-inch diameter, 86-inch face dryers. The wood mill was rebuilt, and new sawing equipment put in, and the chippers re-arranged.

## New Round Log Barker

Considerable work was also done in the pulpwood supply end of the Crown Willamette operations. At Cathlamet, Wash., where the company operates a barking plant near their timber operations, an addition was built on the plant and a new round log barker installed. This new machine operates on a different principle than previous barking units, depending on the hammer-head action of bars on a rotating head to knock the bark from the logs. A wire brush following the hammer-head completes the cleaning operation.

As adjuncts to the barker, a 96-inch circular saw with steam feed and direct connected motor, and a chipper were placed in the plant. Chips produced here are shipped by barge to the company's mills at Camas, Wash., and West Linn, Ore.

The building housing the company's tissue plant at Camas was enlarged, providing 10,000 square feet additional floor space, and giving better working arrangements. The McMaster building, across the street from the general offices, was taken over and converted to company office and storage use.

Pacific Mills, Ltd., a Crown Willamette subsidiary, carried out extensive improvements during the year. At Vancouver, B. C., a new fibreboard container plant was completed, giving capacity for the production of 3,000 tons of fibreboard containers a year. The structure is of the steel truss type, reinforced concrete construction, and is two stories in height. Its size is 135 feet long

and 55 feet wide, giving generous working space.

Main equipment consists of a 100-inch bar creaser, a 2-cylinder, 2-color 56-inch by 144-inch boxboard press, an automatic panel creaser, a 100-inch open slotter, and two electrically driven monitor wire stitchers.

At the Ocean Falls plant further improvements were made, chiefly in the addition of suction presses to paper machines, and the conversion of one to a board machine.

Few major changes were made in the Longview mill of the Weyerhaeuser Timber Co., the newest pulp mill in the West. The most interesting addition was that of an experimental laboratory adjoining the digester building. The chief item of equipment is an experimental digester, three by nine feet, made of alloy steel throughout, and equipped with an acid circulating system and other fittings which give the operators great flexibility in the various cooking methods and conditions which may be employed. The digester is installed within the digester building itself.

## A Miniature Pulp Mill

Another two-story structure was built adjoining it, to house the stock tanks, etc. Here is the blow pit, raw stock tank, screened stock tank, white water tank, screens, etc. The piping is so arranged that stock may be pumped back and forth through the experimental plant in any desired manner. The whole unit is a miniature pulp mill in itself.

During the year a sulphur melter was added to the acid plant to improve its operation, and minor changes were made in the screen room.

At the Olympic Forest Products Co. mill in Port Angeles, considerable overhauling work was done when the plant reopened in April last year, after a brief shut down. New construction during the year has consisted of the addition of a

new finishing room, and of more dryers in the machine room.

The new finishing room is 60 by 120 feet, and houses two bridge cranes which handle the pulp rolls, the cutter, layboy and baling equipment. The pulp was formerly cut into flat sheets as it came from the machine. Olympic Forest Products has also just started construction of a new warehouse building, 44 by 80 feet.

Early in 1934 the vacuum dryer was improved by the addition of a suction press, and of two stacks of open dryers at the wet end of the machine, permitting the use of lower drying temperatures and assuring fewer breaks in the vacuum chamber.

Activities of the Washington Pulp & Paper Corporation at Port Angeles were chiefly in the wood end of the operations, with the enlargement of the Neah Bay logging operations, and the forming of plans for the reconstruction of the wood room at the mill. A steel-line canal between the lagoon and bay was constructed for log handling purposes.

Fibreboard Products, Inc., Port Angeles plant made no material changes during 1933, but early in 1934 announced plans for the construction of a new digester, the work of which is now going on. Improvements in the acid plant are also being made, and other plant facilities are being enlarged to take care of the additional output.

#### Big Chipping Plant

An important development took place at Port Townsend, when the National Paper Products Co. built a new chipping plant with a new type of barker which has proved successful. This large unit brought out new ideas in wood room practice and efficiency, being designed for simplicity and speed in operation, with minimum wood loss. In the main, it consists of a 96-inch cut-off saw which cuts the logs into 20-foot lengths as they come up the log haul, a nine-foot band mill with 60-inch carriage and 13 by 16 geared feed, which breaks down the log, the new type cutter-head barker, and two chippers, 110-inch and 84-inch. Auxiliary equipment such as conveyors, transfer chains, fuel hog, etc., completes the installation.

The Hawley Pulp & Paper Co. made numerous improvements in various parts of the mill during the year. A flume to carry pulpwood from the railroad to the ground wood mill was built to avoid the previous practice of barging it across

the river basin from the freight cars. No. 2 machine was changed over from a Harper to a special pickup job for lightweight papers. The operation involved turning the Fourdrinier around, reversing the wet end, and installing a special pickup arrangement. No. 1 machine was also overhauled recently. In the pulp mill a chemi-pulp system was installed.

The Hawley wood mill at Milwaukie, Ore., was destroyed by fire, but has not yet been rebuilt. To replace it, the company leased the Crown Willamette Mill H, and converted it into a cut-up plant.

#### Shaffer Mill Reconditioned

The Shaffer Pulp Co. mill at Tacoma was shut down during 1933, but reopened in March, 1934. The steam plant was completely overhauled, all new brick work installed, and the stack lengthened. A machine shop and storage building, 60 by 80 feet, was constructed, and a complete new laboratory fitted out. Minor improvements were also made in the acid plant.

Four new turbines, ranging from 150 to 450 h.p., were placed on the machines at the Salem, Ore., plant of the Oregon Pulp & Paper Co. The company formerly used high pressure steam for drying but the new arrangement permitted the use of high pressure steam for driving power, and the exhaust steam for drying.

The wood room at the mill was rebuilt, and two new horizontal steam splitters put in, with additional conveyors, etc. Another improvement was the erection of a hypochlorous acid tower.

Columbia River Paper Mill, the affiliated Vancouver, Wash., company, also reconstructed its wood room. The machine shop of the company was destroyed by fire early in 1934, and was rebuilt at once.

#### Everett Improvement Program

The Everett Pulp & Paper Co. carried out an extensive improvement program during the year, both in equipment and buildings. Size presses were installed on No. 1 and No. 3 machines, plus auxiliary equipment including three size tanks, recording-controlling instruments, etc. No. 1 machine was remodeled extensively, the wet end being lengthened, a rubber-covered suction press added, seven new dryers installed, and improved surface watermarking equipment provided. A new two-stage Stockmaker beating unit was also put in to handle the beating for No. 3 machine.

The building housing No. 1 and No. 2 machines was lengthened 25 feet, and a new roof with monitor lighting constructed. The testing laboratory was enlarged, an addition to the office building was erected, as well as an enclosed runway between the machine rooms and a new steel bridge from the office to the street level.

Considerable work was also done by the Rainier Pulp & Paper Co. at Shelton. The water supply system was extended, circulating systems installed on several digesters, with more now being put in, the office building was enlarged, and a new type waste liquor disposal system constructed. The latter is a newly designed evaporator-incinerator which evaporates the water from the liquor and burns the residue, providing heat for the process.

The St. Helens Pulp & Paper Co. added a hypochlorous acid bleaching plant, filter plant facilities and auxiliary equipment.

After being shut down for two years, the Spaulding Pulp & Paper Co. plant at Newberg, Ore., started up in January. The barking and chipping plant was remodeled and a chemi-pulp system installed in the digester building.

#### Anacortes Additions

The Anacortes plant of the Puget Sound Pulp & Timber Co. reopened in August after considerable reconditioning work was done. The screens were rebuilt and chromium-plated screens installed. White water storage and stock storage was increased by the building of a new stock tank. The pumping system was changed to meet the new requirements and new pumps were installed in the acid plant and digester room. The Morrison Mill Co. built a new chipping plant adjoining the pulp mill, with a new chip storage bin and conveyor to the top of the digester building.

A complete line of equipment for the manufacture of paper napkins was put in during the year by the Pacific Coast Paper Mills, Bellingham, Wash. Besides the napkin machines, two printing presses were installed for special embossing and printing purposes.

Western Containers, Inc., built a new box plant in Seattle in the past year. The structure is 245 feet long, 75 feet wide at the front, and 150 feet wide at the back, the building being laid out in an "L" shape. Total floor area is 27,000 square feet. A new corrugator the main ma-

chine, 198 feet long and producing a sheet 68 inches wide at 200 feet per minute, was installed in addition to the slotters, taping machines, etc., which were brought from the former plant.

A \$200,000 box plant was built at Emeryville, Calif., for the California Container Company, for the manufacture of corrugated shipping cases and corrugated paper products, and started operations late in 1933.

The Bartram Paper Products Co. constructed a fine new bag factory in Vancouver, B. C., starting production last fall. The plant is of two floors, 165 by 66 feet. Modern in every respect from heating plant to bag machines, the new factory is the outstanding unit of its kind in western Canada.

The Crown Willamette Paper Co. has also recently started erection of a \$75,000 bag manufacturing plant in Los Angeles. It is 86 by 193 feet

in size and will be equipped with the latest in bag-making machinery.

The Pacific Waxed Paper Co., Seattle, put in a new type of waxer, a new 36-inch four-color printing press, and constructed a 60 by 40-foot addition to house a new plate room, where complete equipment has been installed for making stereotypes.

Additions were also made at the North Portland and Oakland plants of the Western Waxed Paper Co.

## NRA CODE DEVELOPMENTS FEATURE EVENTFUL YEAR

An event of far-reaching importance and historical significance during the past year has been the inauguration of the NRA under the terms of the National Industrial Recovery Act, and the drawing together of the entire pulp and paper industry under a Code of Fair Competition.

On June 2, 1933, representatives of the industry met at New York City and organized the industry under the terms of the act. The American Paper & Pulp Association was designated as the central agency for the formulation and administration of a code, and Sidney L. Willson, president of that body was selected as co-ordinator for the industry.

The A.P.&P.A. was reorganized and expanded in order to perform its new functions, J. D. Zellerbach of the Crown-Zellerbach Corporation being elected first vice-president of the group. After the drafting of several tentative codes, the General Code was completed and submitted to the president on September 14 for approval.

Under the terms of the code the industry was divided into divisions, representing the various types of products manufactured. Labor provisions provided for minimum wages to be paid, hours of labor, and guaranteed the right of employees to organize and bargain collectively. Standard methods of accounting and costing were proposed, as well as the filing of open price lists.

This code was approved by the president on November 17 and became effective November 27.

One notable feature was that while the general code covered all

branches of pulp and paper making, except paper board, the makers of newsprint were not brought under the general code but were placed in a separate classification. A separate organization, the Association of News Print Manufacturers of the United States was set up and a separate code prepared for their industry. This was submitted to the NRA for hearing on September 6, and was strenuously opposed by labor and by the American Newspaper Publishers Association, throwing light on at least one of the reasons why newsprint producers were not brought under the general paper code.

Subordinate codes for 22 divisions of the industry such as the blotting paper division, book paper division, kraft paper division, etc., were also approved with the general code. These subordinate codes merely established the branch of the industry under the general code, provided for the establishment of an executive authority board for the division, and for the future determination of trade customs and fair trade practices for submission to the administrator.

The immediate effect of the code was to set a minimum wage for men in the northern states of 38 cents per hour, 35 cents in the central zone and 30 cents in the southern zone and a maximum of 40 hours per week. Wages on the Pacific Coast were already above this minimum with few exceptions. Employees were given the right to organize for collective bargaining, with the result that unions affiliated with the A. F. of L. organized locals in practically every Pacific Coast

mill, where unions had heretofore failed to gain a foothold.

Most mills on the Coast raised wages 10 per cent on an average, and went to the six-hour day, using four shifts per day instead of three.

In the three or four months following the approval of the code, the industry adjusted itself to the new scheme of operation and began the work of ironing out the wrinkles in the first code. A revised code was prepared, and after discussion, a second revision was made May 1, 1934. Some of the salient features of the proposed revised code follow. Provision is made for the handling of any complaint by a division of the industry that imports are endangering the maintenance of the code. Wages are increased in the northern zone to 42 cents per hour for males, 37 cents for females; 39 cents per hour for males in the central zone and 34 cents for females; 34 cents for males and 30 cents for females in the southern zone. The registration of all productive machinery is required, and shifting to a product other than that for which it is registered, or the installation of new equipment which will increase production, is prohibited unless a permit is secured from the administrator. No paper machine may be operated in excess of 144 hours in any one week. The industry agrees to co-operate in the conservation of forest resources and to join in conferences held under Article X of the lumber code.

The revised code has not yet been approved and is not in force at the time of writing. The general code approved by the president November 17 now governs.



## PACIFIC PULP &amp; PAPER INDUSTRY



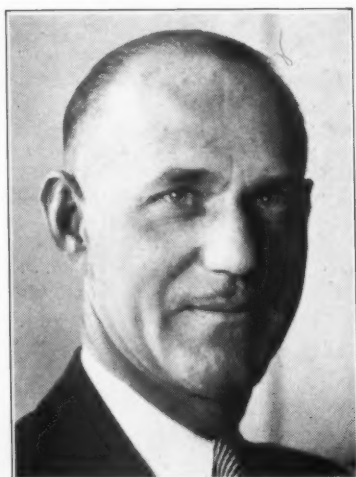
**R. B. WOLF**, Mgr., Pulp Div.  
Weyerhaeuser Timber Co.



**CHARLES G. FRAMPTON**, Supt.  
California Fruit Wrapping Mills



**LEO BURDON**, Mgr.  
Soundview Pulp Co.



**A. W. BERGGREN**, Vice-Pres.  
Shaffer Pulp Co.



**MYRON W. BLACK**, Tech. Dir.  
Inland Empire Paper Co.



**JACK JOHNSON**, Paper Supt.  
Hawley Pulp & Paper Co.



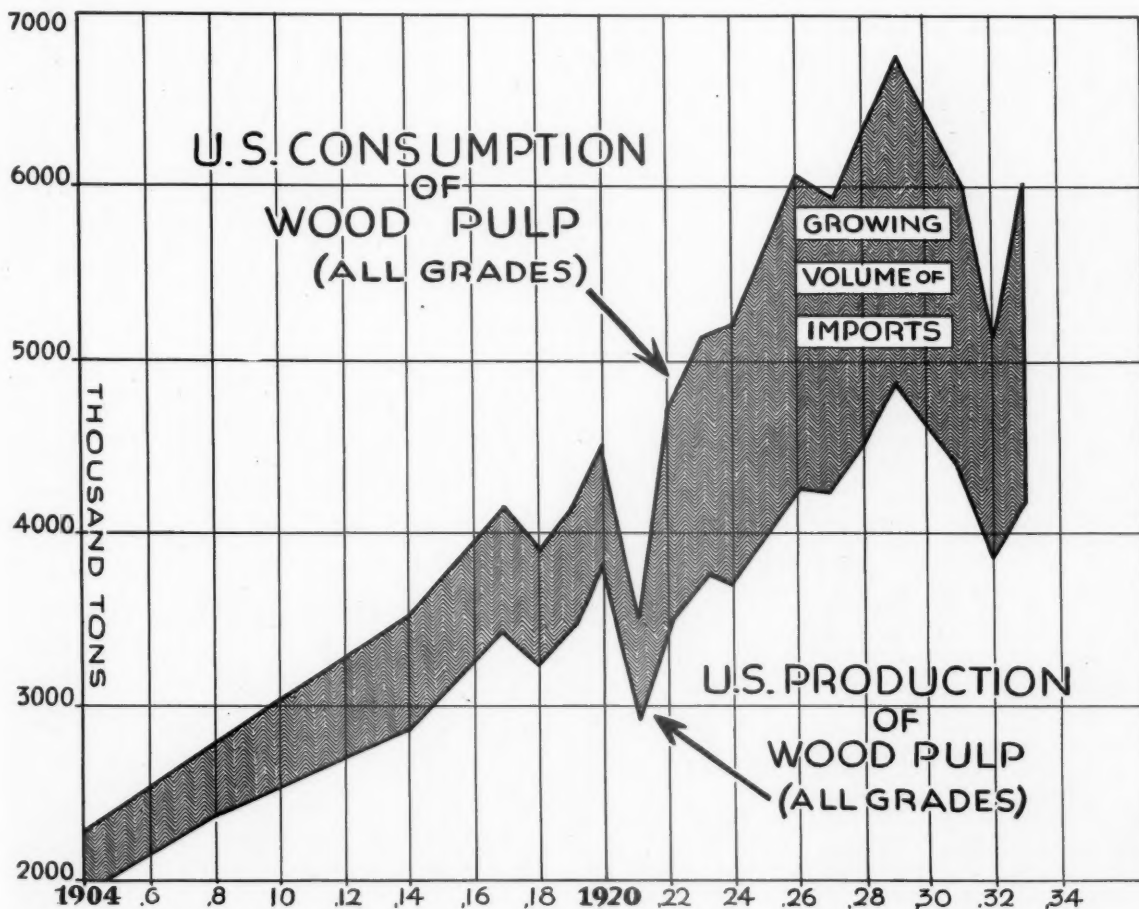
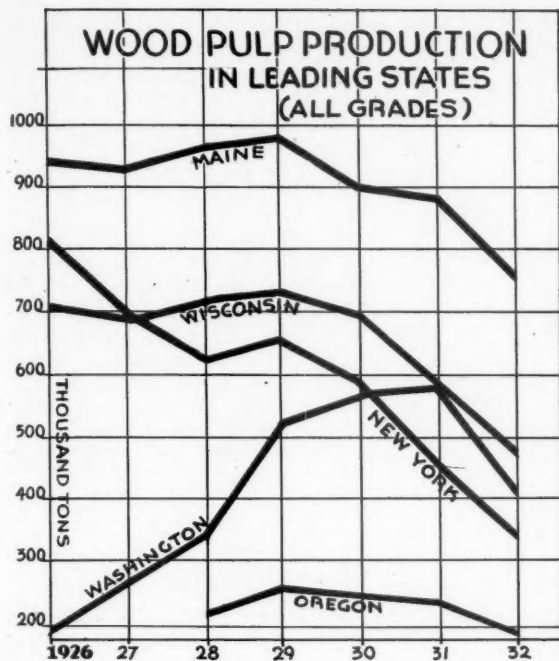
**W. R. GIBSON**, Chief Eng.  
Rainier Pulp & Paper Co.



**J. L. MURRAY**, Sales Mgr.  
Everett Pulp & Paper Co.



**J. P. V. FAGAN**, Supt. (Anacortes)  
Puget Sound Pulp & Timber Co.



## Mill Personnel Changes

Numerous personnel changes took place in the Pacific Coast industry during 1933 and early in 1934.

A major shift occurred at the Oregon City, Ore., mill of the Hawley Pulp & Paper So., when the firm was reorganized by the bondholders committee. Major Watson Eastman became president of the company, and John H. Smith, who was associated with him in the Western Cooperage Co., was named vice-president and general manager.

Carl E. Braun, engineer and superintendent of several western mills, became mill manager. Jack Johnson came back again from the Crown Willamette organization as paper mill superintendent, succeeding Dan Dupuis, and Robert Sipes returned as pulp mill superintendent.

Felix Pagenstecher, former Hawley president, is now with the Nekoosa Edwards Co. George W. Houk, former vice president, has organized the Northwest Paper Sales Co., and also has the Northwest agency for Towelsaver, Inc.

Raymond S. Hatch, well known technical man of the industry, joined the Weyerhaeuser Timber Co. early in 1933, taking charge of their research work.

Carl B. Everitt, formerly with the Anacortes mill of the Puget Sound Pulp & Timber Co., took the position of superintendent of the Columbia River Paper Mills plant at Vancouver, Wash., but later resigned to become superintendent of

a mill in Sweden. His address is now Ohrvicken Kallholmen, Vasterbotten, Sweden.

James G. Ramsey came from the East in the spring of 1933 to take the position of superintendent of the Everett Pulp & Paper Co.

Ray Schadt resigned from the Hawley organization to go with the Crown Willamette mill at Camas. Fred Weleber succeeded him at Oregon City as chief chemist.

C. R. P. Cash, formerly pulp superintendent of the Cascade mill at Tacoma, and later with the Union Bag Co. there, joined the St. Helens Pulp & Paper Co.

### Crown Willamette Shifts

G. P. Berkey became vice-president of Pacific Mills, Ltd., in addition to his position as vice-president of Crown Willamette Paper Co. Frank N. Youngman, vice-president of Pacific Mills, was transferred from Vancouver B. C. to Portland, Ore., and placed in charge of C-Z mill sales in the Pacific Northwest and Canada.

D. G. Stenstrom, formerly resident manager at Ocean Falls, became vice-president of Pacific Mills and was assigned to Vancouver, later moving to the sales department in Toronto. Frank A. Drumb, assistant manager at the Camas mill, became mill manager at Ocean Falls. D. S. Denman logging manager for Crown-Zellerbach, transferred to Seattle in charge of the company's timber activities, as vice-president of

Washington Pulp & Paper Corporation, National Paper Products Co. and Crown Willamette Paper Co.

E. H. Post, secretary at the Camas plant of Crown Willamette was transferred to San Francisco, being succeeded by Paul F. Middlebrook. Phillip A. Henderson, superintendent of logging for the Washington Pulp & Paper Corporation, moved from Port Angeles to the Seattle headquarters.

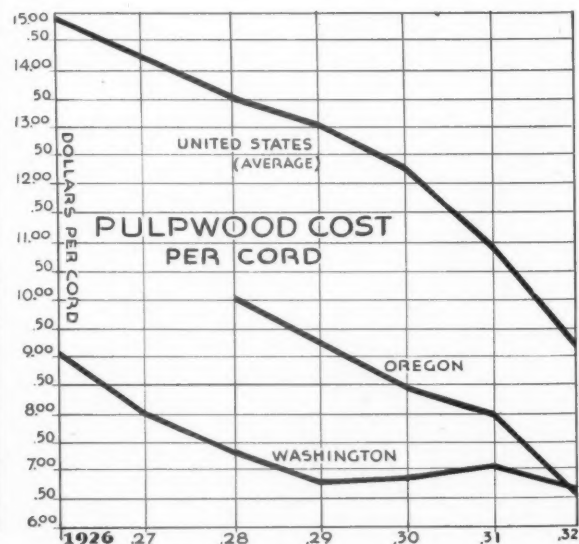
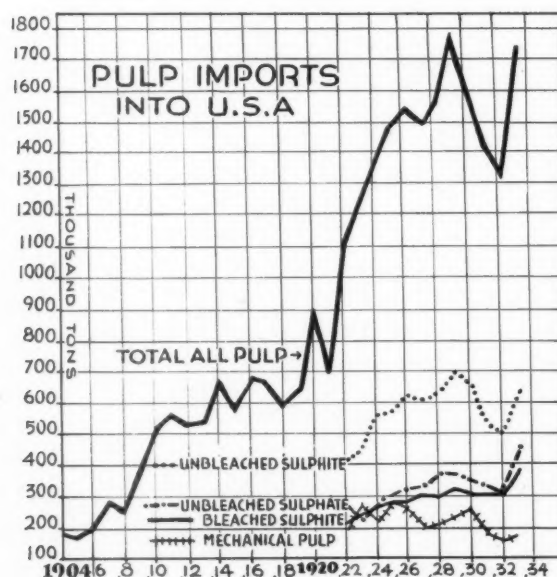
Dan E. Dupuis went from the Hawley mill to the Crown Willamette Paper Co. plant at Lebanon, Ore., as superintendent. Morris Mullens, who had been superintendent at Floriston, Calif., moved from Lebanon to Camas, Wash.

James Fagan, assistant superintendent of the Everett mill of the Puget Sound Pulp & Timber Co., went to Anacortes as superintendent when that mill reopened in August, and E. B. Brookbank joined the company as chemist.

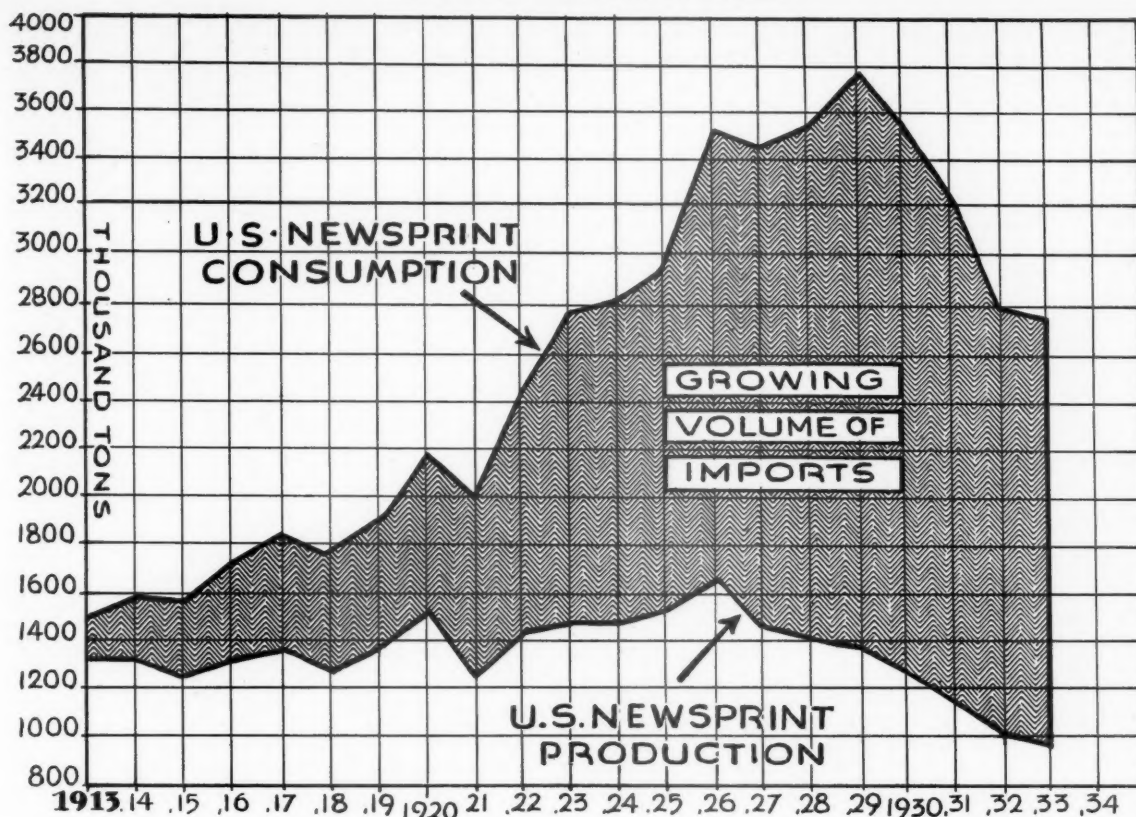
George F. Quigg was promoted to superintendent of the paper mill of the Columbia River Paper Mills at Vancouver, Wash. Fred Newman left the Hawley mill to take charge of sulphite manufacture at Vancouver. Bruce F. Galloway, assistant sales manager of the mill, passed away August 15.

Cort Majors, assistant to W. H. Thomas, San Francisco, sales manager for Fibreboard Products, Inc., was made sales manager for the company at Los Angeles.

A. H. Irving resigned last fall as general superintendent of the Paraffine Companies, Inc. plant at Emeryville, Calif.







W. R. Benson, formerly with the National Paper Products Co. at Port Townsend, Wash., became chief chemist of that company's mill at Carthage, N. Y., in October.

W. J. Van Arnham resigned as assistant traffic manager for Crown Willamette at Portland. C. B. Richards, former traffic manager for Hawley's, went with the Luckenbach Steamship Co. in Portland.

When the Spaulding Pulp & Paper Co., Newberg, Ore., resumed operations early in 1934, J. B. Wilt became superintendent, and Ralph Reid was named chief chemist.

A. E. Millington and Carl Millington resigned from the Fir-Tex Insulating Board Co., St. Helens, Ore. Peter Kerr was elected president of the company at the last yearly meeting.

W. B. "Bruce" Zumwalt, long general superintendent of the Powell River Co., Ltd., resigned his post several months ago and D. H. Parker came from the Abitibi Paper Co. to take over the work.

C. L. Barker, assistant mill manager for Pacific Mills, Ltd., was

transferred to the sales department at Winnipeg, Man.

With the taking over of the Everett mill by the Soundview Pulp Co., Leo S. Burdon, formerly with Rainier Pulp & Paper Co., and later with the International Wood & Sulphite Co., was selected as mill manager. U. M. Dickey of Seattle, vice-president of the company, took on the duties of general manager. G. J. Armbruster remained as superintendent.

T. W. Toovey, chemical engineer for the British Columbia Pulp & Paper Co., at Port Alice, B. C., resigned May 1 to take an advisory position with the industry in Czechoslovakia.

Andreas Christensen came from the position of sulphite superintendent of the Rhinelander Paper Co., and joined the Grays Harbor Pulp & Paper Co., Hoquiam, Wash., recently.

B. T. Larrabee, superintendent of the Pulp Division, Weyerhaeuser Timber Co., Longview, Wash., resigned May 1, and was succeeded by W. Norman Kelly, who had been assistant superintendent.

F. R. Armbruster, son of G. J. Armbruster, joined the Weyerhaeuser organization, working in the laboratory.

A. E. McMaster, general manager of the Powell River Co., Ltd., was recently promoted to the position of vice-president of the company.

Dr. Elbert C. Lathrop, formerly of the Celotex Co., has just joined the Crown Willamette Paper Co. at Camas as technical director.

#### NEW FILTER PLANT FOR WEST LINN

Contract has been let for the construction of a new water filtration plant for the West Linn mill of the Crown Willamette Paper Co. Work is to start at once so that the unit will be completed by early fall.

#### NEW PORT ANGELES WAREHOUSE

Contract has been awarded for the construction of a new warehouse for the Olympic Forest Products Co., Port Angeles, Wash. It will be located on the south end of the present sulphite storage building, will be 44 by 80 feet and of frame construction.

## Trade Personnel Changes

Numerous company and personnel changes took place in the Pacific Coast Paper trade in the last year. Briefly summarized, some of the interesting happenings were:

Vernon Scott, president of Scott-Hosfeldt Co., Portland, purchased the interest of Arthur Hosfeldt when the latter became sales manager for the Hawley Pulp & Paper Co., and the firm resumed its original name of Packer-Scott Co.

Eugene Singer started business early in 1933 as the Contract Paper Co., Los Angeles.

The General Paper Co., San Francisco, acquired the Standard Paper Co. of the same city a little over a year ago.

H. G. Gassett became manager of the San Jose, Calif. branch of the Zellerbach Paper Co., succeeding Philo K. Holland, who joined the executive staff of the Los Angeles branch. About the same time, C. L. Albertson resigned as manager of the Los Angeles wrapping paper department.

O. A. Holstrom, coast manager for the Strathmore Paper Co. and allied firms, died suddenly January 13, 1933. He was succeeded by T. C. Macormack, formerly of Bonestell & Co., and the Zellerbach Paper Co.

### Houk Organizes New Firm

George W. Houk, formerly vice-president of the Hawley Pulp & Paper Co., resigned that position and acquired the Washington and Oregon agency for the Towel Saver,

Inc. He later organized the Northwest Paper Sales Co. of Portland.

Ira F. Doud and G. D. Megel became district managers for the Hawley Pulp & Paper Co. at San Francisco and Los Angeles respectively. Lloyd Riches of the San Francisco office transferred to Portland, while N. L. Brinker, former Los Angeles representative, took on other lines.

Felix Pagenstecher, former president of Hawley's, joined the staff of the Swigart Paper Co., Chicago, and later the Nekoosa-Edwards Co.

John M. Todd, of the Zellerbach Paper Co., moved from Eugene, Ore., to the San Francisco office.

### Cochran Opens Office

Andrew H. Cochran, formerly with the Cascade Paper Co. of Tacoma and of Bonestell & Co., opened an office in San Francisco last year, when he was named western representative for Dill & Collins, Philadelphia.

E. R. Crebbs was appointed vice president and general manager of the Consolidated Cover Co., San Francisco, early last fall.

Irving Spivak, for 17 years with the Los Angeles division of the Zellerbach Paper Co., resigned.

Rodney Ellsworth, previously with Blake, Moffitt & Towne, joined the sales staff of the Doane Paper Co., San Francisco.

Augustus Johnson, San Francisco manager for the Everett Pulp & Paper Co., resigned late in 1933. J. L. Murray, previously director of

sales promotion, became sales manager of the company. John T. Pope, Mr. Johnson's assistant, became San Francisco sales representative, with H. W. Anderson as his assistant.

Eugene S. Elkus and Richard J. Elkus, brothers, formerly with the Zellerbach Paper Co., resigned and opened a new independent paper house, the Elkus Paper Co., in San Francisco.

Everett Nowell was recently appointed Alaska representative of Blake, Moffitt & Towne, succeeding Malcolm S. Wilson, who died in Seattle the first of 1934.

Abraham Newman, who retired several years ago after 40 years' service with the Zellerbach Paper Co., passed away early this year.

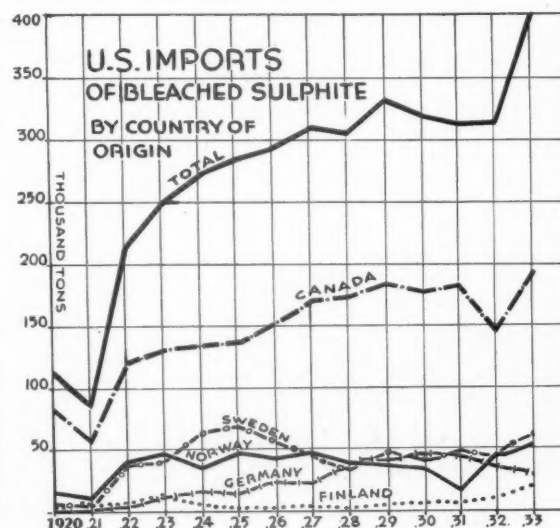
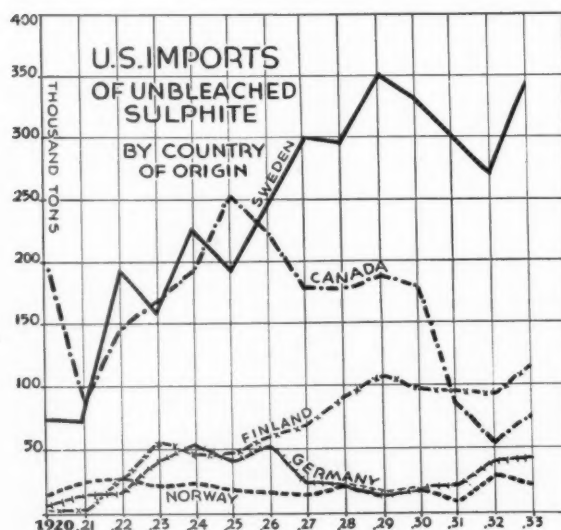
N. D. Hopkinson, recently joined Carter, Rice & Co. Corporation, after several years away from the paper trade. He formerly was with Blake, Moffitt & Towne, and the Zellerbach Paper Co.

W. B. Reynolds resigned from the General Paper Co., San Francisco, and became secretary of the Los Angeles trade association. He was succeeded by Harry D. Bean who became vice-president, director and general manager.

S. Choteau Platt, for the past 19 years with the Sierra Paper Co., Los Angeles, passed away last March. He was also for a number of years with Blake, Moffitt & Towne.

### DENVER MILL SOLD

The mill of the Colorado Paper Products Co. at Denver, was recently purchased by the Central Fibre Products Co.

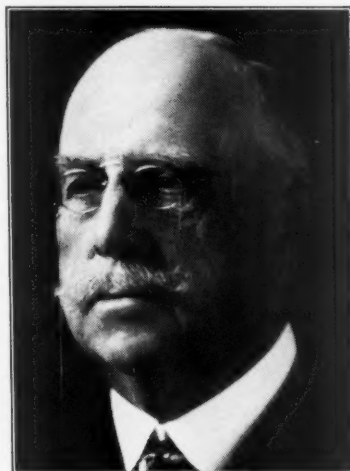




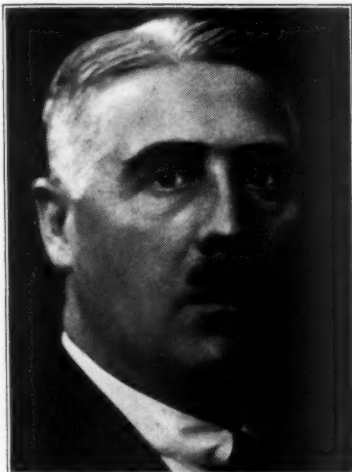
A. E. McMASTER, V-P. and Gen. Mgr.  
Powell River Co., Ltd.



D. S. DENMAN, Vice-Pres.  
Crown Willamette Paper Co.



M. R. HIGGINS, Vice-Pres.  
National Paper Products Co.



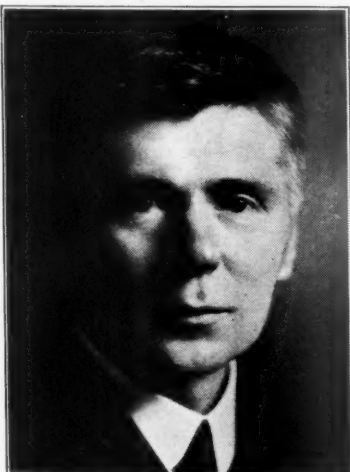
F. O. FERNSTROM, Pres.  
California Fruit Wrapping Mills



A. D. WOOD, Supt.  
Shaffer Pulp Co.



W. J. PILZ, Vice-Pres. and Mgr.  
Everett Pulp & Paper Co.



W. L. KETCHEN, Res. Mgr.  
B. C. Pulp & Paper Co. (Port Alice)



R. M. PICKENS, Tech. Dir.  
Rainier Pulp & Paper Co.



WALTER GENUIT, Sales Dept.  
California Fruit Wrapping Mills





D. B. DAVIES, Mgr.  
Rainier Pulp & Paper Co.



IRVING T. RAU, Sec.-Treas.  
St. Helens Pulp & Paper Co.



D. H. PATTERSON, Vice-Pres.  
Fibreboard Products, Inc.



LAWRENCE KILLAM, Pres.  
B. C. Pulp & Paper Co.



CARL E. BRAUN, Gen. Supt.  
Hawley Pulp & Paper Co.



E. G. SWANBERG, Convert. Dept.  
California Fruit Wrapping Mills



J. FALCONER, Res. Mgr.  
Powell River Co., Ltd.



J. G. RAMSEY, Supt.  
Everett Pulp & Paper Co.



N. G. TEREN, V.-P.-Mgr.  
Oregon Pulp & Paper Co.



# PAPER MERCHANDISING SITUATION IMPROVES

By C. H. BECKWITH

A review of the paper merchandising situation on the Pacific Coast over the past year would embrace a number of momentous changes. The activity has paralleled the course of other major distributing industries in coping with new problems and new conditions.

The paper merchant's position in entering the 12 months' period just closed can be pictured as one of questioning his right to a place in the scheme of things. Consumption on the one hand was still dwindling toward the vanishing point. Production on his other hand was relatively increasing, for manufacturers were introducing new products and more of the old products which they expected to be sold.

The merchant's warehouse was full—or, if not full, was full enough to care for every demand. The merchant didn't seem to be performing his appointed task of distributing the mills' output. The manufacturer could only make paper or close his plant, and the merchant saw only a saturated market. A new deal was necessary.

What has long been a recognized necessity with the merchant, for the maintenance of economical service to the trade he serves, was adopted by a number of manufacturing groups making allied lines, as one remaining means of preventing something resembling disintegration in the industry. That was a more definite program of standardization. With the reduction or elimination of conflicting and overlapping lines and grades, greater possibilities for economical operation were presented.

This program, of course, has necessarily been reflected in the merchant's operation, removing much of the confusion existing in the selection of lines, and has made for a more intelligent rendering of service to the merchant's customer. This more thorough standardization of grades, though a child of necessity, has been an important forward stride for the paper industry.

We have seen in these twelve months a valiant effort on the part of the manufacturing division of the



**C. H. BECKWITH**  
Manager, Pacific Coast Divisions,  
Carter, Rice & Co., Corpn.  
President, Pacific States Paper Trade  
Association.

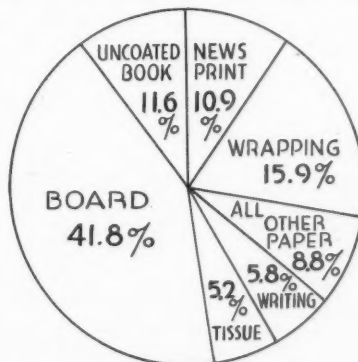
industry to deal with the unemployment problem, and to prevent its becoming more acute. Reduced hours of labor with no parallel reduction in payrolls, and with a consequent higher operating cost, has meant price advances in some of the merchant's more important lines. Reflecting increased payroll costs in the preparation of basic materials, the paper manufacturer has had to contend with elevated costs in both his labor and his material. However,

with a few exceptions, these increases, where they have reached forward to the buyers or users of the products, have been extremely moderate up to the present.

Exceptions occurred where, in the early period during which stiffening prices were felt, a sharp increase of orders went to the mills, not entirely consistent with user demand. While improved demand was felt in some degree, much buying for a rise was undoubtedly going on, although this speculative buying period was of short duration. The majority of merchants held to a policy of purchasing for market demand.

The outstanding development has of course been the Code of Fair Competition for the Paper Distributing Trade, which was approved by the president on December 23, 1933. Prominent in the code's provisions is the "open price" plan, by which the filing of price schedules with the Code Authority is permitted. While the creation and maintenance of the machinery to provide for effective filing and dissemination of prices has been a task of considerable size, this was to be expected in an industry as complex as ours. From the "open price" plan has come a steadiness to the price levels of most of our commodities, and the intent of the Code of Fair Competition is being realized—fairness not only to those in the trade, but fairness as well to the trade we serve.

The close of this twelve months' period sees the merchant realizing a better demand for his goods; a demand which brings his volume just above that border-line point at which he was never certain whether his monthly revenue would just slightly exceed his expenses, or whether—an experience which was common to many—his income was materially under his outgo. Fair competition has come to mean just good business judgment. The Pacific Coast merchant is using the word "chiseler" less and less, and in some quarters not at all. Unquestionably it has been a year of importance to this industry.



Distribution of Total U. S. Paper  
Production, 1933  
According to Principal Grades

## PACIFIC PULP &amp; PAPER INDUSTRY



S. D. BROOKS, Pres.  
Powell River Co., Ltd.



OSSIAN ANDERSON, Pres.  
Puget Sound Pulp & Timber Co.



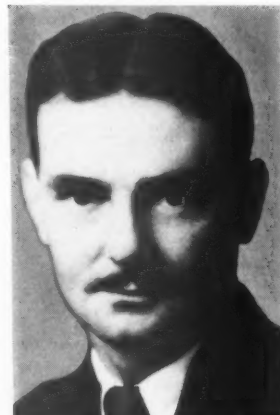
R. A. McDONALD, Vice-Pres.  
Crown-Zellerbach Corp.



R. BELL-IRVING, Asst. Gen. Mgr.  
Powell River Co., Ltd.



RALPH REID, Chief Chemist  
Spaulding Pulp & Paper Co.



P. J. ONKELS, Supt.  
Pacific Coast Paper Mills



T. OSMUND, Pur. Agt.  
Oregon Pulp & Paper Co.



W. NORMAN KELLY, Supt.  
Weyerhaeuser Timber Co.



G. P. BERKEY, Vice-Pres.  
Crown Willamette Paper Co.

# PAPER TRADE GROUP MEETING RECORDS PROGRESS

C. H. Beckwith Elected President for Ensuing Term;  
T. A. O'Keefe New Vice-President of Pacific States  
Paper Trade Association

Definite progress along the "comeback trail" to recovery was chronicled at the seventeenth annual convention of the Pacific States Paper Trade Association held at Del Monte May 10 and 11. Never was a coast paper trade meeting so well attended before; the delegates and visitors were optimistic and enthusiastic and the interesting meetings were marked by frankness in the discussions concerning conditions in the paper trade field and regarding relations between the paper merchants and the mills. Arthur W. Towne, San Francisco, Blake, Moffitt & Towne, 1933-34 president of the association, handled the gavel.

Election of 1934-35 officers resulted as follows:

President—Charles H. Beckwith, San Francisco, Carter, Rice & Co., Corp.

Executive Vice-President—Thomas A. O'Keefe, San Francisco, Pacific Coast Paper Co.

Vice-Presidents—A. W. Akers, Seattle, Zellerbach Paper Co.; Carl H. Fricke, Los Angeles, Taverner & Fricke; W. W. Huelat, Los Angeles, Blake, Moffitt & Towne; John E. Jones, Salt Lake, Western Newspaper Union and G. O. Rogers, Spokane, Spokane Paper & Stationery Co.

By virtue of his election as executive vice-president, Mr. O'Keefe is in line for the presidency for 1935-36. H. Arthur Dunn, San Francisco, was re-elected secretary-treasurer.

## 275 Code Meetings in Year

More than eighty attended the annual joint open meeting of the paper merchants and manufacturers held May 10, President Towne declaring it to be a "very significant gathering because just one year ago President Roosevelt announced the National Recovery Act and little did we know of the work, the meetings and the details lying ahead of us." In the San Francisco paper conference alone, Mr. Towne said, more than 275 code meetings were held during the year. "Thousands of



T. A. O'KEEFE  
Elected Executive Vice-President of  
Pacific States Paper Trade Ass'n.

words were spoken at these meetings," he added, "lay them end to end and see where they get you."

One of the first speakers at the merchants and manufacturers meeting was Sidney J. Burgoyne, greeting card manufacturer of Philadelphia, who said it was "almost unbelievable the contrast between improved conditions now and conditions one year ago." George Olmsted, Jr., S. D. Warren Co., Boston, said the "New deal provides a fair return for what we do;" William C. ("Uncle Billy") Wing, Fox River Paper Co., at Del Monte, between trips to Honolulu, said, "We want what is in the codes; let's get them," and William Howarth, venerable president of the Everett Pulp and Paper Co. of Everett, Wash., declared that he thought the NRA was a great work and would continue for many years. "It is a return to ethical methods of doing business," he added.

President Towne declared at the merchants' and manufacturers' meeting he felt the paper trade was making definite progress under the new program of industry control. "We on the coast," he went on, "are a little ahead of the paper distributing

trade of the rest of the country, for ours was the first wholesale code to be signed and our cost accounting system is being held up as an example for others to follow." He added that coast paper merchants were beginning to give serious thought to scientific merchandising plans.

Otto W. Mielke, San Francisco, Blake, Moffitt & Towne, was all enthused about the codes but felt there was still much work to be done. "Some call this code work education but I call it religion. Some of us are failing to recognize the interests of the other fellow. Manufacturers must leave a rakeoff for the jobber." He pointed out that there were too many so-called distributors on the coast for wrapping paper—"I'm glad they're getting away from calling it 'coarse paper'." In all there are 312 recognized jobbers and this list could be cut in two and still leave too many, he said.

S. L. Brilliant, San Francisco, manager of the paper division of Haas Bros., wholesale grocers, maintained the jobber was very necessary to the success of the paper industry and declared he was against manufacturers selling direct to the customers. "There should be no loopholes in the code permitting this practice."

## Direct Mill Selling Hit

Harold L. Zellerbach, San Francisco, Zellerbach Paper Co., said there was a large number of outstanding surreptitious contracts which must be cleaned up before the industry is on solid ground. "Manufacturers ought to tell the merchants why they think they have to sell direct to consumer accounts. I only hope the manufacturers stop selling direct before they are put to the test . . . the merchants can muddy the manufacturers' waters as easily as the manufacturers can muddy the merchants' waters."

Neil B. Sinclair, Los Angeles, Nashua Gummed & Coated Paper Co., declared his company had de-



cided on the policy of not selling direct. Charles Merchant, San Francisco, Johnson Locke Mercantile Co., paper mill representatives, said paper jobbers didn't always give the mills proper sales support on specialty lines. Otto Meilke answered this by saying few specialty lines gave enough differential for the limited volume.

There was a varied list of papers and discussions on the convention program. Harold Zellerbach, who is vice-chairman of the national code authority for the paper distributing trade and chairman of the Pacific Coast division, went over the code with a fine tooth comb and answered numerous questions. L. J. McGrath, San Francisco, Zellerbach Paper Co., San Francisco, talking on "Process Taxes under the Agricultural Adjustment Act said the taxes had already increased selling prices of paper towels approximately 10%; gummed paper tape 40%; jute twine 20% and cotton twine 15%. "These articles are, in the main," he declared, "expensive items and bought on price. On account of the taxes, customers are turning to substitutes. These taxes are unfair, unjust and inequitable and business is being lost on account of them."

#### Towne Reports Convention

President Towne reported on the recent 1934 convention of the National Paper Trade Association, saying it was the best attended in history, despite the cold weather. Louis A. Colton, San Francisco, Zellerbach Paper Co., urged amalgamation of items by mills in the interests of simplicity. J. E. Jones, talking on the same subject, said amalgamation of items on selling lists of mills would put more business on a wholesale basis, encourage buyers to order in larger quantities yet not put too large a stock of certain items on jobbers' and consumers' shelves. Walter W. Huelat urged price protection to printers, for the printer is the paper jobber's dealer.

Samuel Abrams, Los Angeles, United States Paper Co., Ltd., advocated a separate credit chapter for the wrapping paper group and Frank C. Stratford, San Francisco, Zellerbach Paper Co., talked along the same line, saying the jobbers haven't spent enough time in the interests of wrapping paper to improve conditions.

A. P. Spitko, Salt Lake, Carpenter Paper Co., recommended that the trade give wholehearted support to the manufacturer who will recognize the paper merchant as his legitimate

outlet. "No consideration should be given those manufacturers who persist in selling direct."

Secretary Dunn's membership report showed an increase in the association's membership since the last meeting and a recent return to the body of the Salt Lake members. The convention adjourned with a vote to return to Del Monte during the second week in May next year.

The necrology committee — consisting of G. O. Rogers, F. C. Strat-

ford and J. E. Jones—brought in resolutions of sympathy for the deaths during the past year of the following paper men: C. L. Bonestell, San Francisco, Bonestell & Co.; William N. Patten, Patten Paper Co., Honolulu; Steven I. Hopkins, paper broker of Oakland; Phillip Weston of the Byron Weston Co.; Thos. K. Cree of the Aling & Conway Co. of Pittsburg, and Fred L. McClellan, founder of the McClellan Paper Co. of Minneapolis.

## The Golf Tourney

Paper manufacturers held their sixteenth annual golf tourney at Del Monte in connection with the convention of the Pacific States Paper Trade Association. Frank C. Stratford, San Francisco, Zellerbach Paper Co., kept up his habit of winning the gentlemen's championship flight and received a handsome silver pitcher offered by the trade association as the prize. Mr. Stratford has won this first prize three times and has been runner up five times.

Other winners, prizes and donors were:

Class A—Gentlemen — Won by Chris Allair, San Francisco, A. P. W. Paper Co., silver bowl donated by Everett Pulp & Paper Co. Runner up—Charles Spies, Cupples Co., Los Angeles, tray and glasses from Graham Paper Co.

Class B—Gentlemen — Won by Tommy O'Keefe, San Francisco, Pacific Coast Paper Co., cocktail set from Western Waxed Paper Co. Runner up — I. Zellerbach, dish, from Crown Willamette Paper Co.

Blind Bogey—Gentlemen—William Lambert, Salt Lake City, Zellerbach Paper Co., trays from Pacific Coast Envelope Co. Division.

Best Net for 18 Holes—Gentlemen—Won by Ned Skinner, San Francisco, Martin Cantine Co., desk clock from American Writing Paper Co. Runner-up—Geo. Olmsted, Jr., S. D. Warren Co., Boston, Mass., clock from Geo. La Monte & Son.

Approach and Putting Contest—T. McClaren, San Francisco, Crown-Zellerbach Corp., bowl from Inland Empire Paper Co.

#### Ladies' Events

Championship Flight — Won by Mrs. R. A. McDonald, plate from The Paterson Parchment Paper Co. Runner-up — Mrs. G. J. Ticoulet, clock from Grays Harbor Pulp and Paper Co.

Best Net for Nine Holes—Mrs. Fred Shaneman, dish from Hawley Pulp and Paper Co.

Blind Bogey—Mrs. J. Y. Baruh, dish from Nashua Gummed & Coated Paper Co.

Putting Contest—Won by Mrs. Victor Hecht, case from The Brown Co. Runner-up—Mrs. Jack Akers, vanity case from Union Bag & Paper Co.

Mixed Two-Ball Foursome—Won by Mrs. H. L. Zellerbach and Andrew Christ, Jr., candle holders from Columbia River Paper Co. Runner-up—Mrs. W. J. Pilz and W. D. McWaters, dishes from Fibreboard Products, Inc.

Mrs. W. D. McWaters won the convention bridge tournament for the ladies.

The golf committee was composed of G. J. Ticoulet, San Francisco, Crown Willamette Paper Co., chairman; M. M. Baruh, Andrew Christ, Jr., W. J. Gray and Augustus Johnson.



A. V. ALM  
Chemical Engineer  
California Fruit Wrapping Mills





J. B. WILT, Supt.  
Spaulding Pulp & Paper Co.



MAX OBERDORFER, Pres.  
St. Helens Pulp & Paper Co.



P. J. HERB, Vice-Pres.  
Pacific Coast Paper Mills



R. H. SCANLON, Director  
Powell River Co., Ltd.



E. ECKHOLM, Supt. (Bell)  
Puget Sound Pulp & Timber Co.



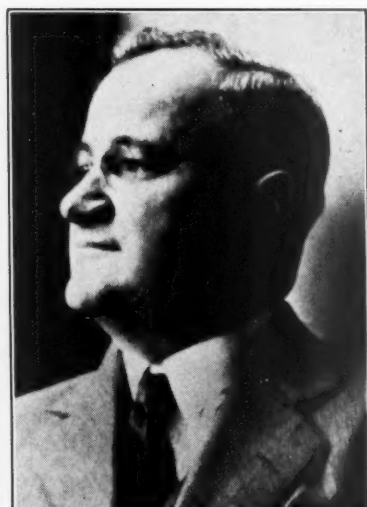
RALPH SHAFFER, Pres.  
Shaffer Pulp Co.



A. B. GALLOWAY, Sales Mgr.  
Oregon Pulp & Paper Co.



I. ZELLERBACH, Pres.  
Crown-Zellerbach Corp.



G. J. ARMBRUSTER, Gen. Supt.  
Soundview Pulp Co.

# PAPER PRODUCTS OF THE PACIFIC COAST INDUSTRY

The Great Diversification of the Western Industry—  
Everything From Pulp to Paper Doilies—Is Indicated  
in This List of Products Manufactured by Some of the  
Leading Pacific Coast Firms.

## J. E. BERKHEIMER MFG. CO.

Tacoma, Wash.

### Products

Saturating Felt  
Building Paper  
Deadening Felt  
Chip and Straw Board

## BARTRAM PAPER PRODUCTS CO., LTD.

Vancouver, B. C.

### Products

Bag Specialties  
Candy Bags  
Coffee Bags  
Garment Containers  
Glassine Bags  
Greaseproof Specialties  
Laundry Bags  
Millinery Bags  
Shopping Bags  
Notion Bags

## BRITISH COLUMBIA PULP & PAPER CO., LTD.

Port Alice and Woodfibre, B. C.

### Products

Bleached, Easy Bleaching and  
Strong Sulphite Pulp

## CALIFORNIA CONTAINER CO.

Emeryville, Calif.

### Products

Kraft Corrugated Fibre Shipping  
Containers—  
A-flute and B-flute  
Single-faced, double-faced  
corrugation, and double walled

## COLUMBIA RIVER PAPER MILLS

Vancouver, Wash.

### Products

Wrappings—  
All grades sulphite and ground  
wood  
Newsprint  
Fruit Wraps—  
Citrus and deciduous,  
oiled, plain or printed  
Toilet Tissues

## CALIFORNIA FRUIT WRAPPING MILLS, INC.

Pomona, Calif.

### Products

Citrus Wraps—  
Treated and untreated, printed  
and unprinted, one or two  
colors, basis weight 10 lbs.  
Deciduous Wraps—  
Oiled and unoled, printed and  
unprinted, copperized, basis  
weight 12 lbs. and heavier.  
Fruit Box Kraft Liners, basis  
weight 20 lbs. and heavier  
Napkins, plain, 10 lbs. and heavier  
Department Store Tissue, flat or  
quirefolded, 10 lbs. and heavier  
Laundry Tissue, flat or quirefold-  
ed  
Bottle Wraps, printed and un-  
printed, basis weight 10 lbs. and  
heavier  
Kraft Raisin Tray Paper, basis  
weight 35 lbs.  
Kraft Wrapping Paper, machine  
glazed, 20 lbs. and heavier  
Sulphite Wrapping Paper, ma-  
chine glazed, 20 lbs. and heav-  
ier

### Brands

"Pomona Brand" only

## CENTRAL FIBRE PRODUCTS COMPANY

(Formerly Colorado Paper Products  
Company)

Denver, Colo.

### Products

Manila Vat-lined Box Boards  
Book Vat-lined  
News Vat-lined  
Test Liner  
Test Chip  
Pasted Chip  
Container Stocks  
Sheathing  
White Blanks  
Colored Folding Box Boards  
Set Up Box Boards  
Plain Chip, Rolls and Sheets  
Pulp Wall Boards

## CROWN WILLAMETTE PAPER COMPANY

Camas, Wash.; West Linn, Ore.;  
Lebanon, Ore.

### Products

Towels—  
Alfibre—Senior, Junior and  
Midget (folded)  
Alfibre—(Roll)  
Kraftpun—Senior, Junior and  
Midget (folded)  
Crown Kraft—Midget (folded)  
Radiant—(Roll)  
Bakers Bags—  
Crown Sulphite Bread Bags  
Crown Bleached Satina Sulphite  
Bread Bags  
Bleached Sulphite Wrapping—  
Crown Snowfibre  
Butcher Papers—  
Crown Alpine Meat Wrap—S.  
F. White Full Bleached  
Crown Meat Wrap—S. F. Nat-  
ural  
Crest Meat Wrap—S. F. or W.  
F. Natural  
Crest Butcher Fibre—W. F.  
Mottled, Natural  
Crest Moistite Butcher—Dry  
Finish (Natural), Pink,  
White  
Citrus Tissues—Plain and Printed  
Crown Citrus  
Colored and Striped M. G. Sul-  
phite Wrapping—  
Crown Damask Alfibre—M. G.  
wide stripe  
Commercial Wrapping Tissue—  
Crown Snowtex Tissue—Full  
Bleached White  
Crown Velvetex Tissue—Un-  
bleached-White and Manila  
Crestex No. 2 Tissue—Un-  
bleached White and Manila  
Converting Kraft—  
Crown Grocery Bag Paper  
Crown Envelope Kraft  
Crown Gumming Kraft  
Crown Asphaltting Kraft  
Crown Waxing Kraft  
Drawing Manila—  
Crown Drawing Manila

Envelope Manila—  
Crown Envelope Manila  
Excelsior Paper—  
Crown Tissue Excelsior  
Fruit Papers—Plain and Printed—  
Crown Satina Fruit Wrap  
Crown Alfibre Fruit Wrap  
Crown Bleached Alfibre Fruit Wrap  
Crownoil Bleached Alfibre Fruit Wrap  
Crownoil Unbleached Alfibre Fruit Wrap  
Crown Copperized Alfibre Fruit Wrap  
Crown Tomato Wraps—M. G. or M. F.—Pink, White or Manila  
Crown Cantaloupe Wrap—Treated—Pink or Manila  
Grocery Bags—  
Crown Kraft—S. O.  
Otter, Reliance, Eagle—S. O.  
Monarch—Striped M. F. Kraft—S. O.  
Maydwell—Gray Kraft—S. O.  
Bee—Unbleached Sulphite—S. O.  
Commander Kraft—Sq.  
Pure Fibre—(Unbleached Sulphite)—Sq.  
Gummed Tape—  
Crown Gummed Tape  
Crest Gummed Tape  
Ham Wraps—  
Crown Ham Wraps  
Kraft Wrapping—  
Crown XX Kraft Golden Brown, M. F. Plain  
Crown XX Corduroy Kraft, Brown, M. F. Striped  
Crown Kraft—Natural Brown, M. F. Plain  
Crown Kraft—Silvertone Gray, M. F. Plain  
Crown XX Damask Kraft—Golden Brown, M. G. wide stripe  
Crown Damask Kraft—Natural Brown, M. G. wide stripe  
Crown Damask Kraft—Silver-tone Gray, M. G. wide stripe  
Manifolding Paper—  
Crown Manifolding Tissue  
Manila Wrapping—  
Crown Manila  
Crown Manila (Bakers 20 lb.)  
Mill Wrappings—  
Crown Mill Wrapper  
Napkins—  
Embossed, Genuine Crepe, Semi-crepe, Full Bleached Napkins  
Fixture and Special-fold Napkins  
Package Napkins—Full Bleached and colors  
Newsprint—  
Standard News (rolls)

Commander News (sheets)  
Crown Printers Roll News  
Crown Printers Sheet News  
Crown Flat-bed Sheet News  
Crown Pink, Green and Peach News  
Odd Bags—  
Crown Merchandise Bags  
Crown Notion Bags  
Crown Millinery Bags  
Crown Garment Bags  
Crown Banana Bags  
Crown Barrel Bags  
Crown Poultry Bags  
Crown Sugar Bags  
Crown Nail Bags  
Crown Confectionery Bags  
Crown Laundry Bags  
Crown Shopping Bags  
Roll Toilet Tissue—  
10-Lb. Fourdrinier Tissue—650-750-1000 and 2000 count  
10-Lb. Fourdrinier Notched Oval Tissue—400 count—7 and 8 oz. rolls  
12-Lb. Full Bleached Tissue—1000 count  
12-Lb. Unbleached—Semi-crepe—650 count  
13-Lb-14-Lb. Semi-bleached—Semi-crepe—4-5-6-7 and 8 oz. rolls  
Full Bleached Genuine Water Crepe—6-7-8 oz. rolls  
Specialty Bags—Plain and Printed—  
Crown Raisin, Prune, Peach and Fig Bags  
Raisin Tray—  
Crown Sunbeam Raisin Tray  
Salesbook Manilas—  
Crown Salesbook Manila  
Imitation Greaseproof—  
Crown XX Sulpar  
Crest Parchspun  
Sulphite Box Liners—  
Crown Water Crepe Box Liners—Pink, Blue and White  
Crown Machine Crepe Box Liners—Pink, Blue and White  
Crown Uncreped Box Liners—Pink, Blue and White  
Sulphite Wrapping—  
Crown Manila  
Crown Alfibre  
Crest Alfibre  
Tire Wraps—  
Crown Tire Wraps  
Waxing Sulphite  
Crown Opaque Bread Wrap  
Crown Bleached Waxing Sulphite  
Waxing Tissue  
Crown Snowtex Waxing Tissue  
Crestex Waxing Tissue  
Waxed Papers—  
Crown Waxfibre  
Crest Waxfibre  
Florist Tissue  
Waterproof Paper (Laminated)—  
Crown Sealtite Kraft

**CALIFORNIA-OREGON PAPER MILLS**

Los Angeles, Calif.

**Products**

Wrappings—  
Manila, kraft and sulphite  
Tissues—  
White and colored  
Fruit Wraps—  
Oiled, plain and printed  
Waxing Papers—  
Plain and printed  
Tire Wraps  
Vegetable Parchment  
Specialties  
Crepe Paper

**CERTAIN-TEED PRODUCTS CORPORATION**

Richmond, Calif.

**Products**

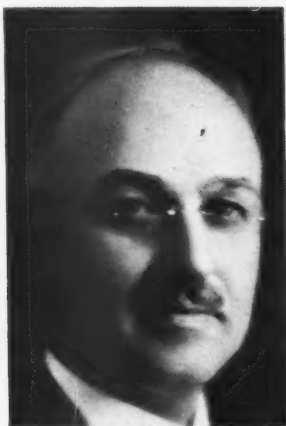
Roofings—  
Mineral surfaced shingles  
Mineral surfaced roll roofing  
Fine surfaced roll roofing  
Bricktex siding  
Felts and Building Papers—  
Asphalt felt, 10, 15 and 30 lb.  
Saturated and coated insulating  
Asphalt sheathing  
Building insulator  
Tuf-Tite kraft sheathing  
Flax felt  
Blue plasterboard, 30 and 60 lb.  
Deadening felt, ¾, 1 and 1½ lb.  
Sheathing paper, 20 and 30 lb. Brands  
Shingles—  
Speedlay, Sealdon, Universal  
Saf-T-Lok, Mul-T-Form  
Roll Roofing—  
Diamond Point, Super Certain-teed  
Certain-teed, Guard, Corporal

**EVERETT PULP & PAPER CO.**  
Everett, Wash.

**Products**

Railroad Writing (O.P.S.), white, amber, blue, pink, green  
Penmanship Writing (M Grade), white  
No. 4 Opacity Bond, white, canary, buff, blue, pink, green, goldenrod  
Stadium Bond (surface sized), white, canary, buff, blue, pink, green, goldenrod  
Anchor Book Laid Mimeo (slack sized), white  
Anchor Book Wove Mimeo (sized) white  
Laid Mimeo (slack sized) white  
Signwell Mimeo ("152X" hard sized), white wove, blue, pink, canary, buff, green, goldenrod  
Machine Finished Book, white, india, yellow, blue, pink, green, orange

## PACIFIC PULP &amp; PAPER INDUSTRY



F. R. TITCOMB, Gen. Mgr.  
Weyerhaeuser Timber Co.



LOUIS BLOCH, Pres.  
Crown Willamette Paper Co.



P. F. KNIGHT, Vice-Pres.  
Puget Sound Pulp & Timber Co.



O. A. JORGENSEN, Gen. Mgr.  
B. C. Pulp & Paper Co.



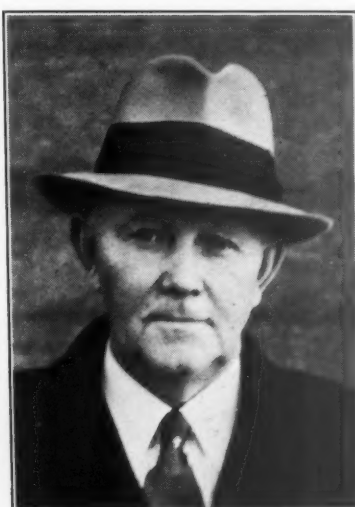
N. M. BRISBOIS, Gen. Op. Mgr.  
Fibreboard Products, Inc.



W. W. GRIFFITH, Res. Mgr.  
St. Regis Kraft Co.



GEORGE W. BROWN, Supt.  
Inland Empire Paper Co.



J. J. HERB, Pres.  
Pacific Coast Paper Mills



WM. HOWARTH, Pres.  
Everett Pulp & Paper Co.



Super Book, white, india  
 Masterpiece Book (25x38—50 and heavier), white  
 Art Book (English finish), white, india  
 Monastery Text (eggshell), white, india  
 Anchor Book (M. F.), white  
 Super Rotogravure, white  
 Soap Wrapper (alkali proof), white  
 "Hard-Wear" Catalogue (25x38—40 and heavier), white  
 Non-Fading Poster, white, orange  
 No. 1 Offset (tub sized) (25x38—50 and heavier), white  
 No. 2 Offset (tub sized), (25x38—50 and heavier), white  
 M. F. Label, white  
 Super Label, regular, white; tub sized, white  
 Tablets, Composition Books and Fillers  
 Opaque School Papers  
 West Trade Commercial Stationery  
 Federal Reserve Perforated Pads  
 West Trade Columnar Pads  
 Adding Machine Paper  
 ("Everett" brand used where not otherwise noted)

**GRAYS HARBOR CORPN.**  
 Hoquiam, Wash.

Products

Sulphite Bonds  
 Mimeograph  
 Manila  
 Writing  
 Offset  
 Specialties

**GRAYS HARBOR PULP & PAPER CO.**

Hoquiam, Wash.

Products

Bleached Sulphite Pulp

**INLAND EMPIRE PAPER CO.**  
 Millwood, Wash.

Products

Newsprint—  
 Rolls and Sheets  
 White, cream, colors  
 High Grade News—  
 Special halftone and magazine print  
 Catalogue  
 Mimeograph News—  
 Laid and wove  
 White and six colors  
 Sub. 16, 20 and 24  
 Coarse Papers—  
 Wrappings  
 Car Linings  
 Screenings  
 Ham Wrap  
 Sheathing

**JOHNSON ENVELOPE CO.**  
 San Diego, Calif.

Products

Catalog Envelopes  
 Expanding Envelopes  
 File Folders  
 Filing Envelopes  
 Mailing Envelopes  
 Merchandise Envelopes  
 Photo Mailers  
 Tag Envelopes

**LONGVIEW FIBRE COMPANY**  
 Longview, Wash.

Products

Board—

Sulphate Test Liner  
 Sulphate Corrugating Board  
 Kraft Boxboard

Paper—

Plain and Watermarked machine glazed Kraft Wrapping  
 Plain and Watermarked machine glazed Kraft Bag Papers  
 Watermarked machine glazed Soap Wrappers  
 Machine glazed Envelope Kraft Papers  
 Machine glazed and fourdrinier Tire Wrap  
 Fourdrinier machine finished Wrapping Papers  
 Fourdrinier machine finished Butchers' Papers  
 Fourdrinier machine finished Bag Papers  
 Fourdrinier machine finished Cartridge, Powder and Shell Papers

**BAGS** (Plain or Watermarked, machine glazed or machine finished, printed or unprinted)—

Grocery Bags  
 Millinery and Notion Bags  
 Garment Bags  
 Barrel Bags  
 Poultry Bags  
 Nail Bags  
 Laundry Bags  
 Shopping Bags  
 Bread Bags  
 Sugar Bags  
 Raisin Bags  
 Bag Specialties

Containers—

Solid Fibre Shipping Containers  
 Corrugated Shipping Containers

Folding Boxes—

Clothing Boxes  
 Laundry Boxes  
 Cake Boxes  
 Millinery Boxes  
 Folding Box Specialties

**Waxed Paper Products—**

Waxed Papers  
 Waxed Butter Cube Bags  
 Waxed Specialties

**Asphalted Paper Products—**

Duplex Waterproof Kraft Sheathing Paper  
 Duplex Waterproof Kraft Car Liner  
 Duplex Waterproof Kraft Egg Crate Liner Bags  
 Duplex Waterproof Kraft Poultry Box Liner Bags  
 Asphalted Specialties  
 Paper Towels

**LOS ANGELES PAPER MFG. CO.**  
 Los Angeles, Calif.

Products

Asphalt Roofing  
 Composition Shingles  
 Saturating Felt  
 Deadening Felt  
 Red and Gray Duplex Sheathing  
 Car Linings  
 Industrial Floorings  
 Dry Felts

**NATIONAL CARD, MAT & BOARD CO.**

Los Angeles, Calif.

Products

Artists Illustration Board  
 Backing Board  
 Embossed Boards  
 Linen Finish Boards  
 Calendar and Photo Mount  
 Card and Mat Board Products  
 Coated Board  
 Cover Papers  
 Display Cases and Easels  
 Greeting Card Stock  
 Illustration Boards and Bristol  
 Paper Board Specialties  
 Pasted Board  
 Picture Backing Board  
 Poster Board and Paper

**NATIONAL PAPER PRODUCTS COMPANY**

Port Townsend, Wash.

Products

.016 Kraft Liner Board  
 .030 Kraft Liner Board  
 .016 to .038 Suit Box Board  
 Cement Bag Paper  
 Grocery Bag Paper  
 Kraft Wrapping Paper

**OREGON PULP & PAPER CO.**  
 Salem, Ore.

Products

White and Colored Bond  
 Writings  
 Envelope  
 Ledger  
 Mimeograph  
 Glassine, greaseproof—  
 Bleached and unbleached  
 Specialties  
 Manifold  
 Parchment

(Continued on next page)

**OLYMPIC FOREST PRODUCTS CO.**

Port Angeles, Wash.  
Products  
Bleached Sulphite Pulp

**OWENS-ILLINOIS PACIFIC COAST CO.**

San Francisco, Calif.  
Products  
Corrugated Shipping Cases (1)  
Corrugated Fruit Box Pads  
Liners and Collars (2)  
Brands  
(1) OnIzed  
(2) No-Bruz

**PACIFIC COAST PAPER MILLS**

Bellingham, Wash.  
Products  
Toilet Tissue—  
Bleached, Manila and white roll  
Interfolded  
Napkins—  
Printed, colored, embossed  
Flat, quarter-fold, eighth-fold,  
Dispenser fold  
Towels—  
Bleached Kraft  
Brands  
M. D. Tissue, etc.

**PACIFIC NORTHWEST PAPER MILLS, Inc.**

Portland, Ore.  
Product  
Bags—  
Garment, Hat, etc.  
Safety Paper

**PACIFIC STRAW PAPER & BOARD CO.**

Longview, Wash.  
Products  
Combination Board  
Plain Chip Board  
Solid News  
News and Manila Lined  
Bleached Manilas  
Mist Gray and Colored Boards  
Container Board  
Test Board  
White Patent Coated Board  
Solid Pulp Board  
Egg Case Filler  
Tag Boards

**PAPER SPECIALTY CO.**

Portland, Ore.  
Products  
Can Liners  
Cake Plates  
Butcher Plates  
Liner Specialties  
Paper Raincoats  
Toilet Seat Covers  
Paper Window Shades

**PARAFFINE COMPANIES, INC.**

Emeryville, Calif.  
Products  
Roll Roofing  
Building papers  
Sheathing papers  
Car linings  
Mulch papers  
Pipe wrappings  
Brands  
Pabco brand on all

**PIONEER PAPER CO.**

Los Angeles, Calif.  
Products  
Rag Roofing, Dry Felt—  
All weights, 12 to 108 lbs.  
Deadening Felt  
Chip Board, 40 to 150 lbs.  
Red and Gray Rosin-sized Sheath-  
ing  
Blue Plasterboard up to 60 lbs.  
Duplex Kraft Sheathing  
K-B Asphalt Sheathing

**POWELL RIVER CO., LTD.**

Powell River, B. C.  
Products  
News Print

**PUGET SOUND PULP & TIMBER CO.**

Anacortes and Bellingham, Wash.  
Products  
Unbleached Sulphite Pulp,  
shredded

**RAINIER PULP & PAPER CO.**

Shelton, Wash.  
Products  
Bleached Sulphite Pulp

**ST. HELENS PULP & PAPER COMPANY**

St. Helens, Ore.  
Products  
Bleached and Unbleached Kraft  
Paper—  
Wrapping  
Envelope  
Gumming  
Waxing  
Bag  
Butchers  
Tire wraps  
Fruit and cantaloupe wraps  
Box liners  
Toweling tissue

**ST. REGIS KRAFT CO.**

Tacoma, Wash.  
Products  
Sulphate Pulp

**SCHMIDT LITHOGRAPH CO.**

San Francisco, Calif.  
Products  
Corrugated Shipping Cases  
Fruit Box Pads and Liners  
Corrugated Advertising Cutouts  
Coated Papers for Labels

**SIDNEY ROOFING & PAPER CO., LTD.**

Victoria, B. C.  
Products

Box Board  
Test Board  
Felts  
Building Paper  
Roofing

**SPAULDING PULP & PAPER COMPANY**

Newberg, Ore.  
Products  
Unbleached Sulphite Pulp.

**SOUNDVIEW PULP CO.**

Everett, Wash.  
Products  
Bleached Sulphite Pulp

**WASHINGTON PULP & PAPER CORPORATION**

Port Angeles, Wash.  
Products  
Newsprint

**WESTERN BOARD PRODUCTS COMPANY**

Salem, Ore.  
Products  
Specialty Board for—  
Binder's board  
Trunk  
Suitcase  
Furniture  
Automobile Board

**WESTERN PAPER CONVERT-ING CO.**

Salem, Ore.  
Products  
Adding Machine Rolls  
Glassine and Confectionary Bags  
Candy Bags  
Cellophane Bags and Specialties  
Cash Register Rolls  
Aluminum Foil, printed  
Greaseproof Specialties  
School Papers  
Wrapping Specialties

**WESTERN WAXED PAPER CO.**

Oakland, Calif.  
Products  
Waxed Papers—Printed and Plain  
Waxed Paper Bags—Printed and Plain  
Kleerwrap

(Concluded on page 44)



**CARL SCHMIDT**, Vice-Pres.  
Schmidt Lithograph Co.



**R. S. WERTHEIMER**, Res. Mgr.  
Longview Fibre Co.



**J. D. ZELLERBACH**, Pres.  
National Paper Products Co.



**ARTHUR HOSFELDT**, Sales Mgr.  
Hawley Pulp & Paper Co.



**ROBERT SIPES**, Pulp Supt.  
Hawley Pulp & Paper Co.



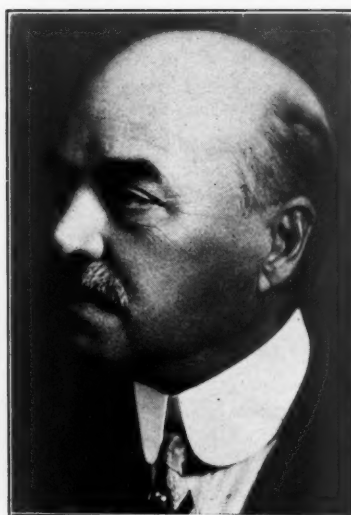
**K. O. FOSSE**, Pres.  
International Wood & Sulphite Co.



**F. SCHMITZ, Jr.**, Supt.  
Rainier Pulp & Paper Co.



**N. B. GIBBS**, Res. Mgr.  
Washington Pulp & Paper Corp.



**A. H. B. JORDAN**, Vice-Pres.  
Everett Pulp & Paper Co.

Riegelite  
 Western Opaque  
 Snowflake Lunch Rolls  
 Butter Wraps  
 Bread Wraps  
 Candy Wraps  
 Transo  
 Shredded Waxed Paper  
 Icepak  
 Defiance Sheathing Paper  
 Adsealit Bands  
 Majonnier Liners  
 Egg Crate Lining Bags  
 Gummed Tape  
 Lettuce Crate Kraft  
 Bread Wrapping Machines  
 Plant Covers  
 Waxfibre  
 Asparagus Wraps

**WESTMINSTER PAPER CO., LTD.**

New Westminster, B. C.

**Products**

Wrapping—  
 Kraft and Sulphite, 15 to 40 lbs.  
 Second Sheets—  
 White and Colored  
 Vegetable Fruit Wraps—  
 Plain, oiled, printed  
 Tissues, all colors  
 Toilet Tissues—  
 Plain, creped, glazed  
 Towels and Napkins  
 Waxed Paper, plain and printed  
 Specialties

**WEYERHAEUSER TIMBER CO.**

Longview, Wash.

**Products**

Bleached Sulphite Pulp

**WHEDON PAPER CONVERTING COMPANY**  
 Los Angeles, Calif.

**Products**

Cake Circles  
 Candy Dividers  
 Discs (paper, parchment, waxed)  
 Doilies  
 Lace Paper  
 Packing Specialties  
 Wrapping Specialties

**FIBREBOARD PRODUCTS, Inc.**

Port Angeles, Sumner, Wash.  
 Los Angeles, Stockton, Antioch, Cal.

**Products**

Boxboards—  
 Miscellaneous Boxboards  
 Paper Cans: Tubes—  
 Paper Cans  
 Coffee Cans

Drug Cans  
 "White-Tite" Cans  
 Double "White-Tite" Cans  
 Mailing Tubes  
 Telescope Mailing Tubes  
 Screw Top Mailing Cases  
 Kraft Tuck-end Mailing Tubes  
 Fluted Ice Cream Dishes

Egg Packing—  
 6x6 Fillers  
 Egg Cartons, 3x4 and 2x6  
 "Cushion-Pak" Egg Cartons  
 3x4 and 2x6  
 Egg Case Flats

Corrugated Products—  
 Corrugated Rolls  
 Photo Mailers  
 "Super-Test" Corrugated Shipping Cases

Milk Cases  
 Coffee Cases  
 Beer Cases  
 Wine Cases  
 Glass Cases  
 Miscellaneous Cases  
 Cereal Cases  
 Butter Cases  
 Display Stands

Solid Fibre Products—  
 "Super-Test" Solid Fibre Shipping Cases

Fruit and Vegetable Cases  
 Cannery Cases  
 Dried Fruit Cases  
 Salmon Cases  
 "Re-file" Cases  
 Butter Cases  
 Miscellaneous Cases  
 Cereal Cases  
 Soap Cases  
 Liquor Cases

Pails—  
 Food Pails  
 Ice Cream Pails

Commodity Folding Boxes—

Cake Boxes  
 Cake Circles  
 Candy Boxes  
 Florist Boxes  
 Clothing Boxes  
 Laundry Boxes  
 Hat Boxes  
 Millinery Boxes  
 Collar Bands

Fruit Packing—  
 Liners—Corrugated and Chip  
 Pads—Corrugated and Indent  
 Collars

Fig Trays  
 Fig Partitions  
 Fruit Baskets  
 Berry Baskets  
 Peach Shims  
 Orange Shims  
 Basket Shims  
 Shims—Plain and Combination  
 Basket Circles  
 Tree Bands



ARTHUR ZIMMERMAN, Mgr.  
 Pacific Straw Paper & Board Co.

**BRITAIN'S NEW TARIFF TO BENEFIT CANADIAN MILLS**

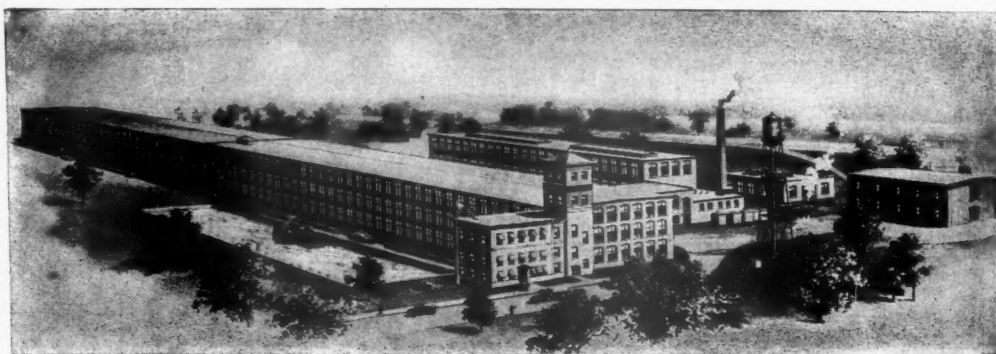
Canadian pulp and paper producers expect to derive a good deal of benefit from the increase in import duty on foreign paper and board made from paper or pulp, established by the British government. The duty is to be advanced to 20 per cent and will apply to all grades of paper except kraft board.

Most of the prospective gain will be at the expense of Swedish pulp and paper manufacturers, who have been shipping to Great Britain under a 15 per cent duty. Paper liable to the duty is that class which, when fully extended, weighs more than 90 pounds to the ream of 480 sheets, or double crown, measuring 30 by 20 inches.

Canadian paper enters Great Britain free. Twenty per cent is the maximum duty that can be set on foreign paper products in consequence of a trade treaty between Britain and the Scandinavian countries. The new duty was set largely as a result of representations made to the British government by the Canadian Pulp & Paper Association.

In 1932, the last year for which statistics are available, Canada exported to Great Britain cardboard, millboard, wallboard and pasteboard valued at about \$1,000,000, out of total imports of about \$10,000,000. All these kinds of paper were believed to fall within the classes against which the duty has been raised. In 1933 total imports were approximately the same and, while the Canadian share is not definitely known, it is believed to have been somewhat larger.





THE HOME OF ALBANY FELTS

*Felts For:*

Leather Board  
 Straw Board  
 Box Board  
 Bristol Board  
 Tissue  
 Bond  
 Writings  
 Insulation Board  
 Mulch Paper  
 Straw Paper  
 Wrappings  
 Glassine  
 Newsprint  
 Cellucotton  
 Wall Board  
 Soda Pulp  
 Sulphite Pulp  
 Building Papers  
 Asbestos Papers  
 Cement Shingles  
 Blotting  
 Book  
 Chip Board  
 News Board  
 Cover  
 Kraft  
 Ledger  
 Manila  
 Rope  
 Ground Wood Pulp  
 Binders Board  
 Toweling  
 Condenser Paper  
 Bottle Cap Board  
 Catalogue  
 Envelope  
 Container Board  
 Hanging  
 Coating Boards  
 Coating Papers  
 Tag Board

## SPECIALIZATION

Ours is a specialized business—that of making *good* paper machine felts. It is different from any other textile business in the world.

Our designers, spinners, weavers, research chemists, finishers, are all specialists with years of sound experience in felt making. Some of them have followed their particular line of work for 25 years.

Machinery, too, is *special*. Much of it is of our own design.

Our resources and world-wide experience have led the paper industry to bring all manner of problems to us involving the use of felts.

If you have an unusual machine condition which is bothering you, let us know about it. Perhaps we can help you.

## ALBANY FELT COMPANY

ALBANY, NEW YORK



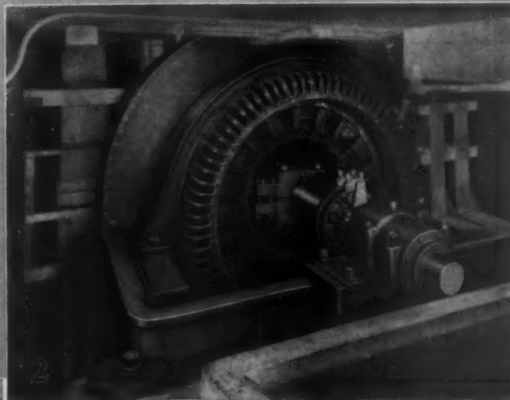
# PACIFIC PULP & PAPER INDUSTRY

47

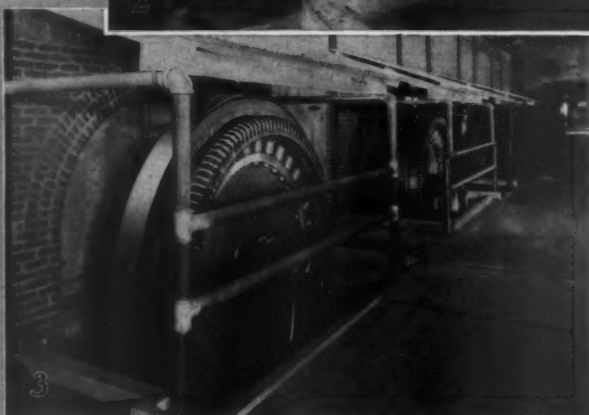
OREGON										Wrapping.
Company	City	Capacity (sq. ft.)	Capacity (sq. ft.)	Capacity (sq. ft.)	Capacity (sq. ft.)	Capacity (sq. ft.)	Capacity (sq. ft.)	Capacity (sq. ft.)	Capacity (sq. ft.)	
Crown Willamette Paper Co.	Lebanon	35								
Crown Willamette Paper Co.	Oregon City	60								
Crown Willamette Paper Co.	West Linn	375	90							
Fir-Tex Insulating Board Co.	St. Helens									*
Hawley Pulp & Paper Co.	Oregon City	170	85							
Oregon Pulp & Paper Co.	Salem		20	100						
St. Helens Pulp & Paper Co.	St. Helens		(60)							
Sitka Spruce Pulp & Paper Co.	Empire									
Spaulding Pulp & Paper Co.	Newberg		80							
Western Board Products Co.	Salem									8
CALIFORNIA										
California Fruit Wrapping Mills	Pomona									
California-Oregon Paper Mills	Los Angeles									
Certain-teed Products Corp.	Richmond									
Crown Willamette Paper Co.	Floris-ton									
Fibreboard Products	Los Angeles									
Fibreboard Products	Stockton									
Fibreboard Products	Los Angeles									
Fibreboard Products	Antioch									
Johns-Manville Corporation	Pittsburg									
Los Angeles Paper Manufacturing Co.	Los Angeles									
Paraffine Cos., Inc.	Emeryville									
Pioneer Paper Co.	Los Angeles									
COLORADO										
Central Fibre Products Co.	Denver	15								
Successors to Colorado Pulp & Paper Co.										
HAWAII										
Olaa Sugar Company	Olaa									
Hawaiian Cane Products Co.	Hilo									
Total daily capacities										
Total Pulp Capacity—All Grades										5,492
Total Paper Capacity—All Grades										4,625

\*Totals do not include 250,000 sq. ft. of insulating board.  
 Total Pacific Canadian Capacity—Pulp, 1,360 tons; Paper, 1,010 tons.  
 Total Pacific United States Capacity—Pulp, 4,132 tons; Paper, 3,615 tons.

# FROM POWER PLANT

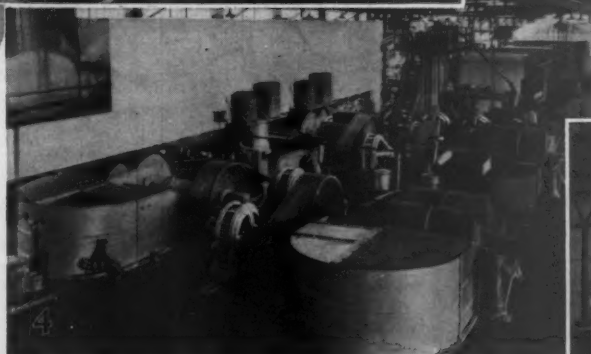


**1 POWER PLANT**—Turbine-generators, power-plant auxiliaries, switchboards—in fact, everything electrical for your power plant can be obtained on one order blank from General Electric



**2 CHIPPERS, SHREDDERS, WOOD HOGS**—G-E synchronous motors, with their high efficiency, and their ability to improve power-factor and to withstand high peak loads, are particularly recommended for machines like these. Send for Bulletin GEA-1709

**3 GRINDERS**—In paper mills all over the country, you'll find G-E synchronous motors driving pulp grinders. Users like them because of their inherent high efficiency and their capacity for plant-power-factor improvement. Write for Bulletin GEA-1711



**4 BEATERS**—From our complete line of synchronous and induction motors and control, we can supply you with the **RIGHT MOTOR** and the **RIGHT CONTROL** for every type and size of beater



**5 JORDANS**—There isn't a better drive made for Jordans than the G-E synchronous motor. One paper mill in the West reequipped its Jordans with G-E synchronous motors and is now saving \$3800 annually on power cost alone

# GENERAL



# TO FINISHING ROOM

## See General Electric for Everything Electrical

**Y**OU'LL find it profitable as well as convenient to see General Electric for everything electrical in your paper mill—from turbine-generators for steam-power-balance, complete switchgear to tie-in with purchased power, and distribution equipment for your plant, to the double-motor or dual-frequency drives for your supercalenders in the finishing room. General Electric can meet your every need with dependable equipment, progressive engineering, and prompt service.

Study the pictures on this page. They were taken in leading paper mills from coast to coast, and offer you photographic proof of General Electric's ability to supply your requirements—proof of the confidence placed in G-E equipment by paper-mill men.

Remember, for everything electrical, see General Electric. General Electric, Dept. 6C-201, Schenectady, N. Y.

**7 PAPER MACHINES**—Installing or modernizing your paper machines? If so, it will pay you to see General Electric's two types of drive—the sectional drive and the single-motor drive. Each offers distinct advantages.



**9 SUPERCALENDERS**—General Electric double-motor and dual-frequency supercalender drives are characterized by maximum safety, minimum floor space, and simplicity of control. For complete information on these modern drives, write for Bulletin GEA-1638



**6 PUMPS**—Close cooperation between pump manufacturers and our designing engineers makes it possible for you to obtain motors and control from General Electric that are literally "tailor-made" for every type and size of pump—a highly important factor where dependability is so essential

**8 WINDERS**—Before you install new winders or modernize the drives on your present ones, don't fail to see our new variable-voltage winder drives with these features: (1) automatic tension control; (2) winds rolls of uniform density; (3) saves power (50 per cent in one case). Write for Bulletin GEA-1745



020-32

# ELECTRIC

## Box Makers Strengthen Position

The past year has witnessed strengthening of the position of the paper box manufacturers of the Pacific Coast because of closer co-operation afforded them by the code and because of improving business conditions.

The co-operative work of the box manufacturers has been carried on through the Pacific Coast Paper Box Manufacturers Association and the various local associations in Los Angeles, San Francisco, Portland and Seattle. There is nearly a 100 per cent membership of the box houses in the code organization or the coast association.

In the spring of this year, the annual convention of the association was held at Del Monte and the two divisions of the industry—the set-up and the folding—were made separate units for the first time, but both remain under the general coast association.

Willis H. Thomas, San Francisco, Fibreboard Products, Inc., is the 1934-35 president of the Pacific Coast Paper Box Manufacturers' Association. C. A. Morgan, Portland, F. C. Stettler Mfg. Co., is vice-president and Charles Ruble, Los Angeles, Standard Paper Box Co., is treasurer.

Executive committees were named for each division. For the set-up division were named: J. W. Scully, Seattle, Puget Sound Paper Box Co.;



HUGH PEAT

William J. O'Donnell, San Francisco, Fleishacker Paper Box Co. and Clarence B. Kerr, Hollywood, Hollywood Paper Box Corp. On the folding division's executive committee are Richard Schmidt, Jr., San Francisco, Schmidt Lithograph Co., Payson Thompson, Portland, Portland Paper Box Co., and Albert E. Stein, Los Angeles, Angelus Paper Box Co.

Hugh Peat, 112 Market St., San Francisco, is secretary of the coast organization, as well as of the San Francisco Paper Box Association. R. E. York is secretary of the Los Angeles group, R. W. Fenton is secretary at Seattle and Meyer C. Rubin at Portland.

### PULP MAKERS HERE FROM NORWAY

Two Norwegian pulp mill men and their New York representative were on the Pacific Coast recently, visiting a number of mills while going through the territory.

They were Eilif Bang, managing director of Tofte Cellulosefabrik, and John Strindlund, mill manager of the same company. J. Westergaard, vice president of Atterbury Brothers, New York, accompanied them.

An interesting feature of their trip occurred when they purchased a Norman chip duster from the Sumner Iron Works at Everett, Wash., to be shipped from here to Norway. So far as is known, this is the first instance of pulp and paper machinery being shipped from the Pacific Northwest to the Scandinavian countries.

### MISS MURRAY MARRIED

Following the Del Monte convention, Lou Murray, sales promotion manager of the Everett Pulp and Paper Co. and Mrs. Murray went to San Francisco to attend the wedding of their daughter, Miss Leah Murray, to John E. Horton of San Francisco, on May 17. Mr. and Mrs. Murray have four daughters and another, Mrs. G. E. Boulden, Seattle, is married also. Lou says every wedding cuts down the family overhead.

### LATHROP NEW TECHNICAL DIRECTOR AT CAMAS

Dr. Elbert C. Lathrop, formerly director of research and development for The Celotex Co., and consulting chemical engineer, has become associated with the Crown Willamette Paper Co. as Technical Director at the Camas, Wash., mill.

### RALPH B. HANSEN

Ralph B. Hansen, technical director of the pulp division, Weyerhaeuser Timber Co., passed away at Maynard Hospital, Seattle, on Monday, May 28.

His death was caused by injuries sustained in a fall when the edge of a cliff, along which he was walking, gave way. Accompanied by several other men of the Weyerhaeuser pulp mill, he was on an outing Sunday, May 20, when the accident took place. He was brought to Seattle for treatment by specialists, but contracted pneumonia and succumbed eight days later.

Ralph was one of the best loved men of the western industry and his host of friends have been grieved to learn of his passing. Graduated from the chemical engineering department of the University of Washington, he became identified with the pulp and paper industry, in the technical department. He was connected with the Rainier Pulp & Paper Co., Shelton, showing such promise that he was promoted and transferred to the Olympic Forest Products Co. at Port Angeles.

When the Weyerhaeuser mill was built he joined the staff as technical director, holding this post until his death. He was active in the technical association, and served as chairman of the Pacific Section of TAPPI.

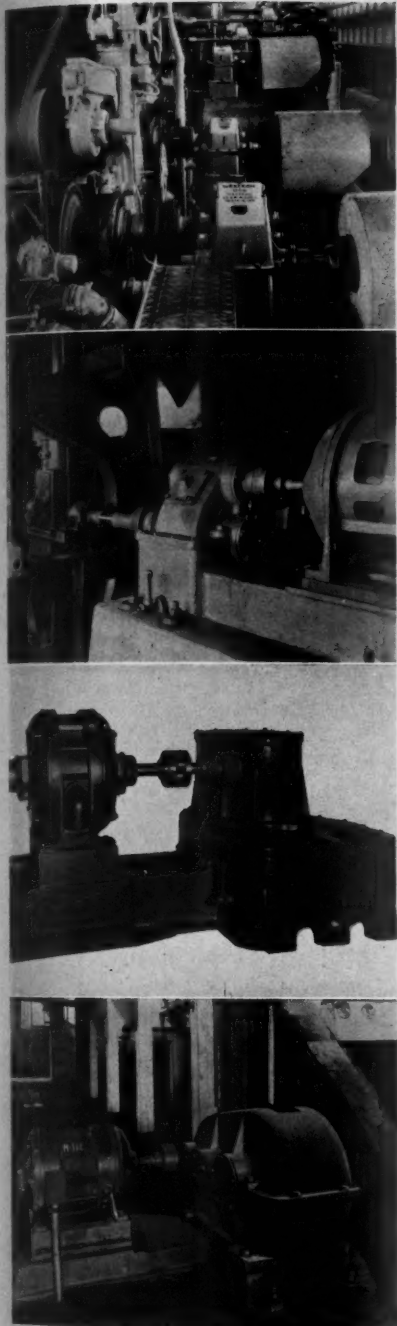
He is survived by his wife, Mrs. Cora Hansen.

### PAPER SPECIALTY SALES IN NEW HANDS

Northwest Paper Sales Co., Portland and Seattle, Geo. W. Houk, manager, has concluded arrangements to take over the sales and management of the Paper Specialty Co., Portland. Portland offices of the Northwest Paper Sales Co. have been moved to 3109 N. E. Sandy Blvd., where the plant of the Paper Specialty Co. is located.

Paper Specialty Co. is installing two new automatic paper food tray machines, which will make fully automatic the production, in popular sizes, of the food trays produced by the firm. The additional equipment will step up the output of paper food trays from 750,000 to 2,500,000 per month.

Sales are going well and the plant has a good order file. Production is being standardized on regular cylinder machine board for food trays. In addition the Paper Specialty Co. will manufacture, and the Northwest Paper Sales Company will sell, various specialties for fruit, such as liners and fruit pads.



# A GEAR DRIVE *for* EVERY JOB IN THE PULP AND PAPER MILL

Whether it is a---

**PAPER MACHINE DRIVE  
FLAT SCREEN DRIVE  
BLEACH TANK DRIVE  
CONVEYOR DRIVE**

or any other drive, there is a WESTERN SPEED REDUCER DESIGNED FOR THAT PARTICULAR JOB.

Nearly every Pacific Coast pulp and paper mill is using WESTERN SPEED REDUCERS which operate with smooth, trouble-proof efficiency year after year under the most severe conditions.

WESTERN has all types of SPEED REDUCERS in operation. . .

**HERRINGBONE ▾ SPUR  
SPIRAL BEVEL ▾ WORM  
HELICAL ▾ ▾ ▾  
MOTORIZED REDUCERS**

**WESTERN OFFERS PROMPT,  
RELIABLE SERVICE**

Give us the facts and our engineers will select the proper gear unit for your drive.

## Western Gear Works

SEATTLE, WASH.

Associated  
with

**PACIFIC GEAR & TOOL WORKS** Incorporated

SAN FRANCISCO PORTLAND



EL PASO

LOS ANGELES

**GEAR PRODUCTS  
FROM GEAR SPECIALISTS**

# WESTERN GEARS



### HEARING SET ON CODE FOR THE PULPWOOD INDUSTRY

Public hearing on a code of fair competition submitted by the American Pulpwood Association, claiming to represent 50 per cent of the pulpwood industry, was conducted by Deputy Administrator W. W. Pickard, beginning June 5, in Washington, D. C.

Under the proposed code, the maximum work-week would be established at 40 hours, with exemption from any hourly limitation in the cases of supervisors, measurers, clerks, cooks, teamsters, stablemen and blacksmiths; employees hired on an hourly basis and classed as day laborers such as road builders, camp builders, saw filers, repair men, drivers, helpers and other workers employed generally in or about camps; employees classed generally as woodsmen, including fellers, cutters, peelers, sawers, yarders and haulers, who are employed on contract, at cord or unit rates; employees engaged in temporary work made necessary by emergency, and employees engaged in seasonal operations or in operations depending upon climatic or physiological conditions.

The minimum wage proposes in the code varies from 20c an hour in the Southern region, to 25c in the Northeastern, Appalachian and Lake States region, and 35c in the West Coast region. Included in the wage provisions is one which requires that charges to employees for rent, board, tools and medical attendance and other services shall be fair.

An elaborate article dealing with the subject of conservation under the code sets up detailed rules of forest practice to safeguard timber from injury by fire or other destructive forces, and to provide for restocking the land after logging.

### NEW RAYON PULP MILL PLANNED FOR MANCHURIA

In an effort to obtain a nearby source of supply for the pulp required by their industry, Japanese rayon manufacturers have organized a company in Manchuria which they hope may be able to produce a satisfactory product.

At present the pulp requirements of Japan's rayon industry are secured from the United States, Canada and the Scandinavian countries, the report states.

The new concern which has an authorized capital of 15 million yen will be known as the Higashi Manchukuo Rayon Pulp Co., Ltd., and began operations on May 1, 1934.

The company has obtained a con-



RALPH M. ROBERG, Gen. Mgr.  
Puget Sound Pulp & Timber Co.

cession from the Manchurian government of a timber stand containing about 1,200,000,000 board feet of timber said to be suitable for making pulp. The first mill will be located near the Manchurian-Korean border on the River Tumen. It is also reported that the concern has received another concession from the Manchurian government containing about 26,400,000,000 board feet of needle leaf trees in the vicinity of the River Sungari, where it is planned to build a second mill.

Each of the mills to be erected by the Higashi Manchukuo Rayon Pulp Co., the report states, will have a potential production capacity of 20,000 tons of rayon pulp per year.

### CARTER, RICE CHANGES

Allen M. Olinger has resigned as manager of the San Francisco division of Carter, Rice & Co. Corporation, effective May 1, completing a long period of efficient service with the company, according to announcement by C. H. Beckwith, Pacific Coast manager.

Edward W. Schulz has been appointed operating manager. N. D. Hopkinson has been named sales manager of the San Francisco division, and Charles J. Staggs has been made manager of the order department.

### FOR SALE

Color printing press—1, 2, 3, or 4 colors on one side, also prints one color on reverse side. Accurate register. Duplicate or triplicate work with perforations if required. Feeds from 1, 2, or 3 rolls up to 36 inches wide. Good for manifolded and labels. Very cheap price for cash. Thos. F. Donahue, 200 Davis St., San Francisco, Calif.

### APRIL NEWSPRINT STATISTICS

Production in Canada during April, 1934, amounted to 216,507 tons and shipments to 220,573 tons, according to the News Print Service Bureau. Production in the United States was 83,652 tons and shipments 86,209 tons, making a total United States and Canadian newsprint production of 300,159 tons and shipments of 306,782 tons. During April 25,311 tons of news print were made in Newfoundland and 1,616 tons in Mexico, so that the total North American production for the month amounted to 327,086 tons.

The Canadian mills produced 242,200 tons more in the first four months of 1934 than in the first four months of 1933, which was an increase of 44 per cent. The output in the United States was 32,050 tons or 11 per cent more than for the first four months of 1933, in Newfoundland 17,494 tons or 22 per cent more, and in Mexico 410 tons more, making a net increase of 292,154 tons, or 31.5 per cent.

Stocks of news print paper at Canadian mills are figured at 37,247 tons at the end of April and at United States mills 22,335 tons, making a combined total of 59,582 tons compared with 66,205 tons on March 31, 1934.

### CANADA'S PULP SALES TO JAPAN INCREASE

Herbert Marler, Canada's minister to Japan, has returned to the dominion to impress on operators of Canadian pulp and paper mills the opportunity for extending their trade with the Far East. He says that Japan could probably obtain a far greater proportion of her supply of rayon pulp from the Pacific Northwest, and that in other varieties of pulp and in newsprint the market prospects are growing steadily.

Last year Japan purchased from Canada 52,000 tons of pulp and 32,000 tons of newsprint. Practically all of this was supplied by mills in British Columbia. Mr. Marler stated that his figures showed that last year there had been an increase of 65 per cent in Canada's sales of pulp to Japan, 20 per cent in sales of paper.

### BAKER IN NORTHWEST

C. M. Baker, water purification and pollution engineer of the American Paper & Pulp Association, visited the Coast recently, spending some time at several mills. He is expected to make a return trip to the Coast in July.



# STOWE-WOODWARD

*Quality*  
**RUBBER  
ROLLS**

**HUNTINGTON RUBBER MILLS<sup>INC.</sup>**  
**SEATTLE ♦ PORTLAND**

## Superintendents Meet June 20-22

Pulp and paper makers throughout the United States and Canada are making arrangements to attend the Fifteenth Annual Convention of the American Pulp and Paper Mill Superintendents Association at the Poland Spring House, South Poland, Maine, on June 20, 21 and 22.

The general conference of the convention will be opened at 10 o'clock Thursday morning, June 21, by President Herbert T. Randall. After formalities and brief routine business the following papers will be presented:

"Newsprint from Southern Pine," by Dr. Charles H. Herty, director, Sanannah Laboratory, Savannah, Georgia.

"Government Printing Office Paper Tests and Their Significance," by Morris S. Kantrowitz, acting technical director, U. S. Government Printing Office, Washington, D. C.

"Improvement in Paper Machinery During 1933-34," by J. Warren Vedder, vice president and general manager, Rice, Barton & Fales, Inc., Worcester, Mass.

On Thursday afternoon the group meetings will be held in the following divisions:

"Soda and Sulphite", B. D. Millidge, chairman, Howard Smith Paper Mills, Cornwall, Ont., Canada.

Board—S. M. Hesser, chairman, Hinde & Dauch Paper Co., Gloucester, N. J.

Book and Fine Papers—E. J. McDonnell, chairman, Tileston & Hollingsworth Co., Boston, Mass.

### M'MASTER WINS PROMOTION

A. E. McMaster, general manager of Powell River Co., Ltd., Vancouver, B. C., has been promoted to the vice-presidency of his company. President S. D. Brooks made the announcement, and in doing so, paid tribute to the able administration of Mr. McMaster, especially during the troublous period of the last few years. Mr. McMaster will continue as general manager.

Mr. Brooks sounded an optimistic note: "We believe that the depression is now definitely past," he declared, "and we recognize the tremendous importance of the work done by Mr. McMaster and his loyal associates in keeping the company on a solid foundation. I believe we are now headed towards an era of greatly improved business."

Tissue—H. H. Harrison, chairman, Crystal Tissue Co., Middletown, Ohio.

Sulphite Pulp—Vance P. Edwards, chairman, International Paper Co., New York, N. Y.

Groundwood—William H. Brydges, chairman, Bedford Pulp and Paper Co., Big Island, Va.

The general conference will be resumed at 9:30 on Friday morning and the following papers will be presented:

"New Stains for Fibre Evaluation and Fibre Identification," by Mr. John H. Graff, Institute of Paper Chemistry, Appleton, Wis.

"Some Economic Considerations in Selection of Paper Mill Drives", by R. R. Baker, Industrial Engineering Department, Westinghouse Electric & Manufacturing Co., East Pittsburgh, Pa.

"Standard Brightness Tester", by Dr. L. C. Lewis, The Mead Corporation, Chillicothe, Ohio.

On Friday afternoon the Annual Business Meeting of the Superintendents' Association and election of officers will be held, following which papers will be presented on:

"Technical Control, Research and Mill Operation", by Clark C. Heritage president of the Technical Association of the Paper Industry and manager of the Maine Coated Division, Oxford Paper Co., Rumford, Maine.

"White Water and Waste Pollution", by Arthur C. Smith, Racquette River Paper Co., Potsdam, N. Y.

Mr. McMaster has been with Powell River Company in an executive capacity almost ever since the war. Previous to that he had been in the transportation business, serving with the Canadian Pacific Railway and Grand Trunk Pacific. On reorganization of the Port Arthur Shipbuilding Company he was appointed secretary-treasurer and in the same capacity was associated with the Whalen Pulp & Paper Company. He joined the Powell River Company as resident manager at Powell River and in 1926 was named director and general manager.

Among those, who attended the Powell River meeting were Edward Brooks and Paul Brooks of Minneapolis and Mr. and Mrs. J. G. Sample of Chicago.

### PHELPS TO OCEAN FALLS

Maurice Phelps, who has been in charge of technical control at the Camas mill of the Crown Wilmamette Paper Co., has been transferred to Pacific Mills, Ltd., as assistant to Frank A. Drumb, mill manager at that plant.

### DURKEE TOURS NORTHWEST

C. L. Durkee of the D. J. Murray Manufacturing Co., Wassau, Wis., was recently in the Northwest, calling at all the mills in company with Ray Smythe.

Mr. Durkee left home early in March and went to New York, Maine, into the South Atlantic states and on to Mobile and New Orleans. Coming back up to Chicago, he came on to the Coast, arriving here May 2.

This was his first trip to the West and he was greeted in Port Angeles by an earthquake, a minor one, but nevertheless an earthquake. From the Northwest, he went on to San Francisco and San Diego, returning to Wassau from the southern city.

### LONGSHORE STRIKE HINDERS OPERATIONS

The strike of the International Longshoremen's Association members, which has been joined in by seamen, masters, mates and pilots and other marine workers has seriously handicapped operations of Pacific Coast pulp mills.

The pulp mill of the Weyerhaeuser Timber Co. closed down due to lack of storage space, as did the Shaffer Pulp Co. at Tacoma. Several other mills announced that unless the strike was settled by the first of June, it would be necessary for them to close also. Thousands of workers, having no connection with the marine workers' labor trouble, have been thrown out of employment.

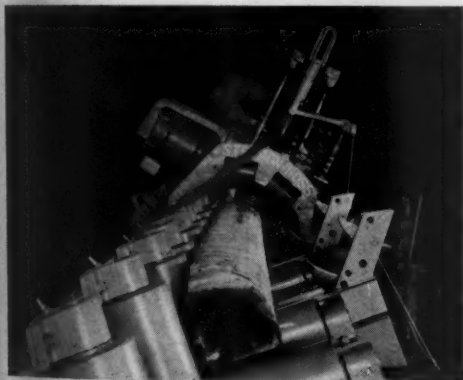
At least one mill has been shipping its output by rail, absorbing the extra cost over water shipment. Others have had trouble shipping by rail even. Several mills have shiploads of sulphur at their docks but have been unable to unload. One plant leased the vacant dry kilns of an adjoining lumber mill, for storage space.

It is anticipated that cargoes will shortly move again normally or nearly so, either through settlement of the strike or through the employment of other means.

# STETSON-ROSS HEADQUARTERS for WOOD CLEANING EQUIPMENT



WB 22 Automatic Slab &amp; Log Section Barker



CZ Automatic Log Section Barker

## AUTOMATIC LOG AND SLAB BARKERS KNOT BORERS

STETSON-ROSS Wood Cleaning Equipment has proved successful in actual operation by producing **CLEANER WOOD** at **LOWER COST** in the woodrooms of leading Pacific Coast pulp mills. STETSON-ROSS Machines clean a **MAXIMUM** amount of wood per shift with a **MINIMUM** of waste. They are remarkably flexible, handling with equal efficiency log sections from 10 to 40 inches in diameter.

### Prominent Users of STETSON - ROSS Equipment:

Weyerhaeuser Timber Co.—Pulp Division, Longview, Wash.

4 WB 22 Automatic Slab and Log Section Barkers.

6 KB 23 Automatic Knot Borers.

British Columbia Pulp & Paper Co., Woodfibre, B. C.

2 WB 22 Automatic Slab and Log Section Barkers.

Morrison Mill Co.—Producing chips for the Puget Sound Pulp & Timber Co., Anacortes, Wash.

1 WB 22 Automatic Slab and Log Section Barker.

Oregon Pulp & Paper Co., Salem, Oregon.

2 KB 23 Automatic Knot Borers.

National Paper Products Co., Port Townsend, Wash. (Crown Zellerbach Corp.)

1 CZ Log Section Barker (This is latest development and largest producer).

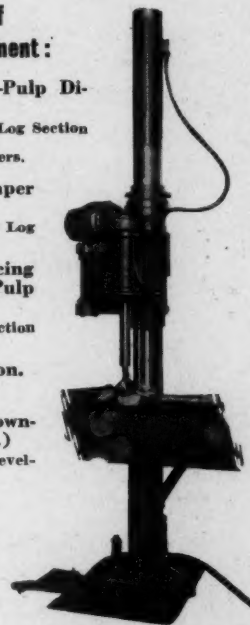
### Other New Pulpwood Machines

Small hand and power slab barkers.

Power round log barkers.

Concave knife grinders for barkers.

Power stroke barkers, with motorized cutter-head for small round logs.



KB-23 RADIAL AUTOMATIC KNOT BORER.

Steam feed—stock tilted to permit boring toward heart.

**Write for Details**

# STETSON-ROSS

## STETSON-ROSS MACHINE CO.

SEATTLE,

U. S. A







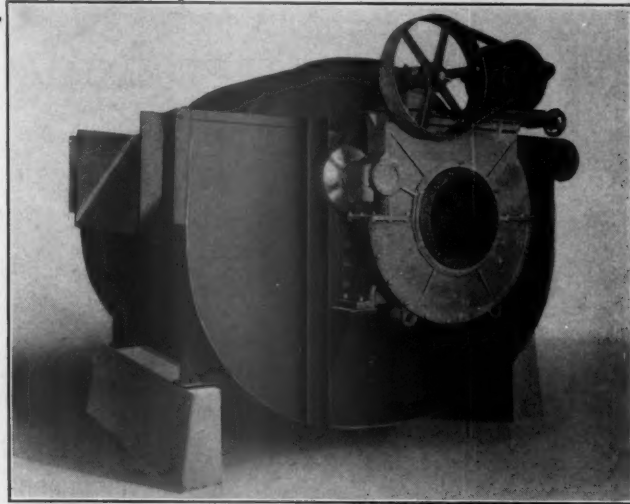
# OLIVER-UNITED Presents

## Something New

Greatly increased water capacity in proportion to area justifies the name of "Highflow".

Compact and of simple construction this filter is a worthy addition to the line of Oliver United filters now so extensively used in the Pulp and Paper Industry.

Can be rubber covered for washing and thickening chlorinated pulp. Also constructed of wood, steel, cast iron and corrosion resisting materials.

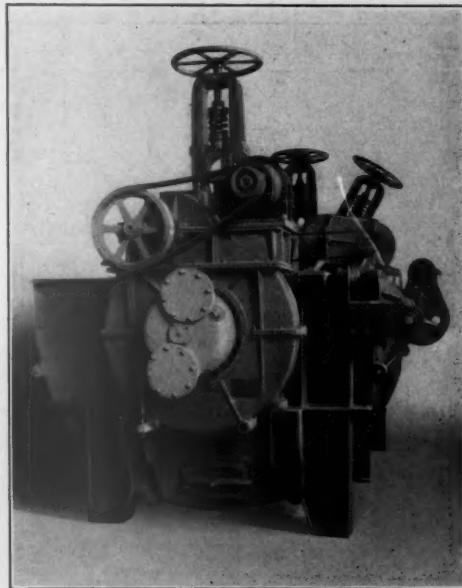


*Rubber Covered Oliver-Young "Highflow" Filter. All parts in contact with Pulp and Filtrate are Rubber Covered.*

## Something Not So New But Worth Recalling

Many of these units have been operating over a period of years and are doing a fine job. They produce uniformly dewatered sheets up to 30% density which is ideal for bleaching. Sheet contains no shiners.

Oliver United makes an extensive line of filters used as Save-Alls, Deckers, Thickeners, Bleach and Stock Washers, Lime-Mud Washers and Board Machines. Variations in type and a full range of sizes available. Approximately nine hundred of these units are now in service. Engineers selecting Oliver United Equipment know that they insure low production costs.



*Oliver High Density Thickener*

**OLIVER  
UNITED FILTERS**

INC.



33 W. 42nd St.  
New York, N. Y.

221 N. La Salle St.  
Chicago, Ill.

351 California St.  
San Francisco, Cal.

# Industrial CHEMICALS

A GENERAL LINE OF  
INDUSTRIAL CHEMICALS FOR YOUR NEEDS

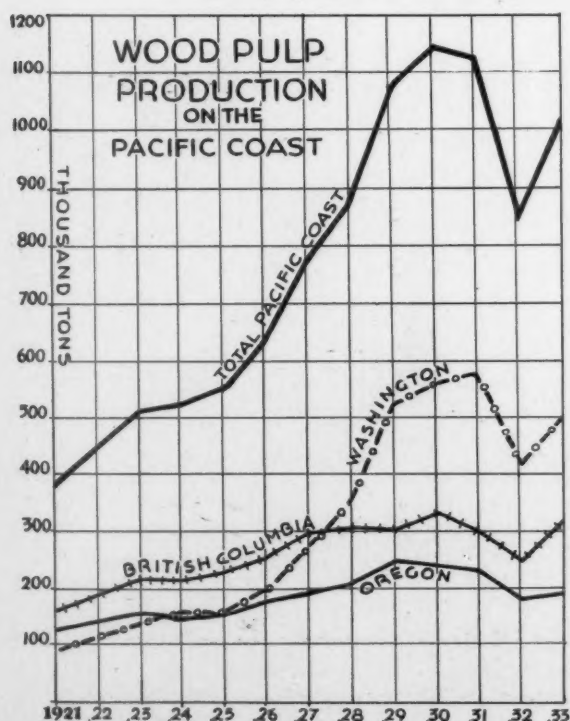
ROSINS — LARODEX BEATER STARCH  
DURO STARCH FLOUR—SODA ASH—WAX  
CAUSTIC SODA — AMMONIA — PARAFFINE  
CHINA CLAY — (Imported or Domestic)  
TALC — (Sierra Talc Company of California)  
PIGMENTS—(White Pigments as Manufactured  
by the New Jersey Zinc Company)

## VAN WATERS & ROGERS

INCORPORATED

PORTLAND  
646 North Thompson Street

SEATTLE  
1263 Sixth Avenue South



## PAINT

ACID, ALKALI, WATER and GAS  
RESISTING SPECIALTIES For The

Paper and Pulp  
Industry

GENERAL PAINT CORP.

PORTLAND, SEATTLE, SAN FRANCISCO,  
LOS ANGELES

Rasmussen & Co.—Division  
PORTLAND

New Customers Can Be Had—With  
**CHEVIOT MEAT WRAP**

Newest of Modern Meat Wrapping Papers

—AND—

**TINTED CHEVIOT WRAPPINGS**

Made in Six Pastel Shades and  
 Four Basic Weights

BLUE—GREEN—ORANGE—RED—BROWN—GRAY  
 25—30—40 and 50 lb.

These New and Original Papers are Products of

**The HAWLEY PULP & PAPER CO.**

Oregon City, Ore.

SAMPLES FURNISHED ON REQUEST



*There's a Reason Why*

**The Terminal Sales Building**

Is Now Portland Paper and Pulp  
 Headquarters

The following Paper and Pulp and affiliated companies have their Portland offices here:

*Graham Paper Company  
 Longview Fibre Company  
 Miller Bryant Pierce Company  
 Weyerhaeuser Timber Co.*

*Also 22 prominent lumber firms.*

FOR UNUSUAL SERVICE AND CONVENIENT LOCATION IN  
 PORTLAND, OREGON, THE TERMINAL SALES  
 BUILDING RATES PAR PLUS

Your Inspection Is Solicited—Building Offices Suite 703

**Terminal Sales Building**

STEPHEN A. HULL, General Mgr.

PORTLAND, ORE.

ALSO TERMINAL SALES BUILDING, SEATTLE, WASHINGTON

THE NEW MEAD BUILDING (5th and Washington) PORTLAND  
 (Same Management)

# STATISTICAL SECTION

## World-Wide Statistical Information of the Pulp and Paper Industry

### United States and Canada

#### ESTIMATED U. S. WOOD PULP PRODUCTION 1933\*

(Tons of 2,000 lbs.)

Total—All Grades	4,241,500
Mechanical	1,202,000
Total Sulphite	1,340,500
Sulphate	1,255,000
Soda	344,000
Semi-Chemical	75,000
Screenings	25,000

\* A. P. &amp; P. A. Estimate.

Note: U. S. Dept. of Commerce reports revised March, 1934, show the following production figures:

Mechanical	1,223,580 short tons
Total sulphite	1,493,310 short tons
(Bleached—728,376 tons).	
(Unbleached—764,934 tons).	
Soda	352,921 short tons
Sulphate	1,234,065 short tons
Total, all grades	4,303,876 short tons

#### ESTIMATED U. S. PAPER PRODUCTION—1933

(Tons of 2,000 lbs.)

Total—All Grades	8,893,000
Newsprint	977,000
Uncoated Book	1,032,000
Paperboard	3,723,000
Wrapping and Bag	1,418,500
Writing	523,000
Cover	16,500
Tissue	464,000
Hanging	62,000
Building	319,000
All Other	358,000

A. P. &amp; P. A. Estimate.

Note: U. S. Dept. of Commerce figures, revised March, 1934, show total paper production for 1933 as 9,233,408 tons.

#### ESTIMATED U. S. PAPER CONSUMPTION—1933

(Tons of 2,000 lbs.)

Total—All Grades	10,622,374
Newsprint	2,759,393
Book	1,022,477
Boards	3,687,989
Wrapping and Bag	1,403,836
Writing	517,015
Cover	16,088
Tissue	459,560
Building	315,392
All Other	440,624

A. P. &amp; P. A. Estimate.

#### ESTIMATED 1933 U. S. PER CAPITA CONSUMPTION OF PAPER BY GRADES

(Pounds)

Total—All Grades	169.0
Newsprint	43.9
Book	16.3
Paperboard	58.7
Wrapping and Bag	22.3
Writing	8.2
Cover	.3
Tissue	7.3
Building	5.0
All Other	7.0

A. P. &amp; P. A. Estimate.

#### UNITED STATES

##### Annual Per Capita Consumption of Paper—1919-1933

(In Pounds)

Year	Cultural Papers			Mechanical Papers		Total all Grades
	News	Uncoated Book	Writing	Paper Board	Wrapping and Bag	
1919	35	16	6.2	35	18.3	124
1920	41	19	7.1	42	21.5	144
1921	37	13	4.3	32	15.2	113
1922	45	18	6.3	43	18.7	167
1923	50	19	6.7	50	21.7	163
1924	50	19	7.0	50	21.9	184
1925	51	20	8.2	57	22.4	198
1926	60	20	8.5	62	24.1	201
1927	58	22	8.5	63	25.6	208
1928	59	23	9.0	67	26.7	221
1929	62	24	9.8	73	26.1	201
1930	58	22	9.2	66	25.4	183
1931	52	19	7.3	62	23.0	156
1932	45	16	6.5	52	19.0	149
1933	43.9	16.3	8.2	58.7	22.3	169

A. P. &amp; P. A. Estimates.



# PACIFIC PULP & PAPER INDUSTRY

61

## PACIFIC COAST WOODPULP PRODUCTION—1921-1933

Pacific Coast States and British Columbia  
(Tons of 2,000 lbs.)

	1921 Tons	1923 Tons	1924 Tons	1925 Tons	1926 Tons	1927 Tons
Washington	95,161	136,943	159,539	161,858	199,164	268,349
Oregon and California	124,494	162,653	149,894	160,736	178,841	200,869
British Columbia	164,746	217,076	216,243	230,733	259,504	296,233
<b>Total Pacific Coast</b>	<b>384,401</b>	<b>516,672</b>	<b>525,676</b>	<b>553,327</b>	<b>637,509</b>	<b>775,471</b>

	1928 Tons	1929 Tons	1930 Tons	1931 Tons	1932 Tons	1933† Tons
Washington	349,107	523,948	566,137	580,016	420,529	500,000
Oregon and California	213,407	256,546	248,992	237,532	187,133	200,000
British Columbia	310,961	304,619	335,429	310,029	259,586	323,431
<b>Total Pacific Coast</b>	<b>873,475</b>	<b>1,085,113</b>	<b>1,150,518</b>	<b>1,127,577</b>	<b>867,248</b>	<b>1,023,431</b>

Source—U. S. figures from U. S. Dept. of Commerce, Bureau of Census; B. C. figures from Dept. of Lands, Forest Branch; and Dominion Bureau of Statistics.

1922 Statistics not available.

†Estimated.

## PULP WOOD CONSUMPTION—1921-1933

Pacific Coast States and British Columbia

	1921 Cords	1923 Cords	1924 Cords	1925 Cords	1926 Cords	1927 Cords
Washington	149,699	191,711	230,299	241,150	305,787	455,664
Oregon and California	192,869	205,199	205,968	209,349	232,989	267,233
British Columbia*	203,000	267,000	266,000	284,100	318,500	364,000
<b>Total Pacific Coast</b>	<b>545,568</b>	<b>663,950</b>	<b>702,267</b>	<b>734,599</b>	<b>857,276</b>	<b>1,076,899</b>

	1928 Cords	1929 Cords	1930 Cords	1931 Cords	1932 Cords	1933‡ Cords
Washington	651,657	956,132	1,000,001	1,025,878	688,326	900,000
Oregon and California	308,264	340,745	351,053	319,876	265,470	275,000
British Columbia*	383,008	352,444	373,397	363,688	304,185	400,000
<b>Total Pacific Coast</b>	<b>1,342,929</b>	<b>1,649,321</b>	<b>1,724,451</b>	<b>1,709,442</b>	<b>1,257,981</b>	<b>1,575,000</b>

Source—U. S. figures from U. S. Dept. of Commerce, Bureau of Census; B. C. Figures from Dept. of Lands, Forest Branch; and Dominion Bureau of Statistics.

\*British Columbia figures prior to 1928 are not shown separately and are estimated on basis of 1.23 cords of wood consumed per ton of wood pulp produced.

†Estimated.

## PACIFIC COAST STATES

Paper Production  
(Tons 2,000 lbs.)

State—	1930	1931	1932	1933†
Washington	395,187	374,765	343,222	375,000
Oregon	128,578	200,065	182,789	200,000
California	230,579	192,273	139,297	175,000
British Columbia	252,730	244,397	228,075	260,599
<b>Total Coast Production</b>	<b>1,007,074</b>	<b>1,011,500</b>	<b>893,383</b>	<b>1,010,599</b>

†Estimated.

## WOOD PULP PRICES IN U. S.

(Per ton of 2,000 lbs.)

Year—	Domestic Bleached Sulphite	Foreign Bleached Sulphite	Foreign Strong Sulphite	Swedish Kraft	Domestic Bleached Soda
1928	\$80	\$68-\$78	\$48-\$55	\$50-\$55	—
1929	75-80	68-77	50-56	47-50	—
1930	65-75	57-68	42-56	30-47	—
1931	45-65	43-57	32-43	28-31	—
1932	35-45	35-43	27-32	25-30	—
1933	35-60	35-57	27-43	25-37	\$40-\$50

Monthly price movement, 1933—

Month	Domestic Bleached Sulphite	Foreign Bleached Sulphite	Foreign Strong Sulphite	Swedish Kraft	Domestic Bleached Soda
January	\$35	\$35	\$27	\$25	\$40
February	40	40	30	25	40
March	40	40	30	25	40
April	40	40	30	25	40
May	40	40	32	25	40
June	45	45	35	26	45
July	50	50	37	32	45
August	55	54	39	34	50
September	60	55	40	35	50
October	60	55	40	35	50
November	60	55	42	37	50
December	60	55	42	37	50

## BRITISH COLUMBIA

Review of Pulp and Paper Production

1919-1933

	Sulphite	—PULP— Sulphate	Tons Groundwood	—PAPER— News Print	Other
1933	122,265	15,715	185,451	237,107	23,492
1932	85,419	10,889	161,502	205,050	24,051
1931	124,521	11,744	170,432	217,562	17,709
1930	130,462	13,055	172,539	224,928	20,446
1929	112,925	15,647	151,066	201,009	19,492
1928	120,413	15,050	170,005	225,477	15,960
1927	119,005	13,700	163,548	214,010	13,745
1926	108,381	15,000	136,123	176,924	10,389
1925	92,514	16,856	121,363	148,201	9,261
1924	89,839	14,403	112,001	136,281	9,653
1923	99,878	9,932	107,266	142,928	7,709
1922	86,894	9,674	100,759	124,639	7,945
1921	68,502	6,519	89,725	110,176	6,934
1920	92,299	16,380	108,655	136,832	9,792
1919	80,347	9,475	99,769	123,607	7,202

Total Production All Grades—Tons  
Pulp Paper

	Total Production All Grades—Tons Pulp	Paper	Estimated value of production:
1933	323,431	260,599	\$10,832,000
1932	259,586	228,075	11,056,000
1931	310,029	244,397	14,893,000
1930	316,056	245,374	16,520,000
1929	279,638	220,501	14,400,000
1928	305,468	241,437	16,755,000
1927	296,253	227,755	18,505,000
1926	259,504	187,313	16,315,000
1925	230,733	157,462	14,466,000
1924	216,243	145,934	13,938,000
1923	217,076	150,637	15,018,000
1922	197,327	132,584	12,590,000
1921	164,746	117,110	13,500,000
1920	217,334	146,624	—
1919	189,589	130,809	—

Source—British Columbia, Department of Lands, Report of the Forest Branch.

## PAPER AND PULP IMPORTS OF THE UNITED STATES

For the Twelve Months Ending Dec. 31, 1932 and 1933

Articles—	PAPER IMPORTS		12 Months, Ending Dec., 1933—		12 Months, Ending Dec., 1932—	
			Quantity	Dollars	Quantity	Dollars
Paper and Manufactures .....				77,446,538		94,089,418
Printing paper—						
Standard newsprint, free .....	thous. lbs.	3,587,082		68,494,657	3,582,294	84,675,654
All other, n. e. s., dut .....	lbs.	4,188,821		89,377	3,639,000	97,226
Greaseproof and waterproof paper, dut .....	lbs.	617,625		82,649	430,746	57,169
Kraft wrapping paper, dut .....	lbs.	8,317,553		275,566	7,237,207	221,169
Other wrapping paper, dut .....	lbs.	1,746,249		65,663	2,538,476	78,638
Writing and drawing paper, dut .....	lbs.	1,606,957		273,443	1,680,914	263,617
Paper and envelope combinations, dut .....				34,075		92,192
Surface-coated paper, dut .....	lbs.	1,252,403		464,459	837,616	342,665
Uncoated paper, decorated or embossed, dut .....	lbs.	26,124		7,961	50,984	13,360
Tissue and similar paper—						
Not over 6 pounds to the ream, dut .....	lbs.	1,131,665		450,705	1,051,732	467,811
Other, dut .....	lbs.	439,367		164,003	373,351	130,322
Paper board, n. e. s.—				218,375	21,663,931	367,009
Pulpboard in rolls, dut .....	lbs.	12,580,717				
Paper board, pulpboard, n. e. s., cardboard, dut .....	lbs.	13,682,817		229,692	10,435,702	182,909
Leather board, test, and wall board, dut .....	lbs.	11,899,775		368,768	2,366,228	135,405
Cigarette paper, books, and covers, dut .....	lbs.	15,349,475		3,426,325	17,442,169	4,141,144
Hanging paper (wall paper), dut .....	lbs.	243,473		71,730	404,160	97,839
Duplex decalcomania, not printed, free .....	lbs.	374,142		71,441	288,104	47,151
Paper boxes, dut .....				403,309		700,378
Papier mache and pulp manufactures, dut .....				365,523		264,887
Other paper and manufactures, dut .....				1,888,823		1,712,873

Articles—	PAPER BASE STOCK IMPORTS		12 Months, Ending Dec., 1933—		12 Months, Ending Dec., 1932—	
			Quantity	Dollars	Quantity	Dollars
Paper base stocks .....				65,329,100		54,446,020
Pulpwoods .....	cords	723,208		5,362,335	648,188	5,581,976
Rough—						
Spruce, free .....	cords	119,227		899,739	114,344	912,451
Other, free .....	cords	625		3,200	22	160
Peeled—						
Spruce, free .....	cords	491,947		3,801,323	458,726	4,206,989
Other, free .....	cords	99,865		585,477	72,432	432,861
Rosced—						
Spruce, free .....	cords	11,544		72,596	2,664	29,515
Wood and other pulp—						
Mechanically ground wood pulp—						
Unbleached, free .....	tons	176,869		3,031,488	152,716	2,997,675
Bleached, free .....	tons	10,881		183,431	15,556	270,782
Sulphite wood pulp—						
Unbleached, free .....	tons	643,003		19,946,124	508,088	17,047,669
Bleached, free .....	tons	400,633		19,138,468	311,046	14,727,214
Sulphate wood pulp—						
Unbleached (Kraft), free .....	tons	461,980		12,568,367	310,659	9,818,674
Bleached, free .....	tons	36,622		2,361,882	23,366	1,975,720
Soda pulp, free .....	tons	3,568		139,245	1,569	65,512
Other pulp, free .....	tons	188		30,005	179	18,127
Rags for paper stock, free .....	lbs.	171,503,795		1,413,830	88,434,994	1,161,315
All other paper stock, free .....	lbs.	105,046,100		1,153,925	84,970,166	781,556

UNITED STATES  
Imports of Unbleached Sulphite—1920 to 1933  
(Long Tons—2,240 Pounds)

	Sweden	Canada	Finland	Germany	Norway	All Others	Total
1920 .....	73,957	207,667	13,502	7,193	3,627	2,062	308,008
1921 .....	73,070	88,112	24,696	14,308	3,137	4,770	208,093
1922 .....	193,218	146,690	27,642	16,968	29,134	4,048	422,700
1923 .....	159,065	167,725	58,602	42,851	21,222	12,388	461,853
1924 .....	226,978	192,308	48,007	54,944	26,079	13,554	561,920
1925 .....	193,034	253,670	48,996	42,362	20,639	20,083	579,284
1926 .....	244,925	226,153	61,804	54,305	18,613	23,123	628,923
1927 .....	299,875	179,630	70,106	25,487	17,747	21,011	613,856
1928 .....	297,130	179,751	92,778	23,933	23,456	23,607	640,660
1929 .....	350,152	190,565	109,121	16,822	18,325	16,471	701,456
1930 .....	331,968	180,417	99,881	19,049	20,210	14,152	665,075
1931 .....	300,682	88,604	97,467	22,212	10,195	16,850	536,010
1932 .....	270,894	56,335	95,579	42,330	31,402	19,667	516,207
1933 .....	346,684	76,537	116,019	43,895	26,597	33,271	643,003

Source: Department of Commerce, Bureau of Foreign and Domestic Commerce.

## IMPCO VACUUM FILTERS

**Save-Alls, Washers,  
Thickeners**

"IMPCO" Cylindrical Beam all metal mould construction for rigidity—all metal drainage sections for permanently accurate diameter mould—smooth free drainage interior for cleanliness of open end moulds.

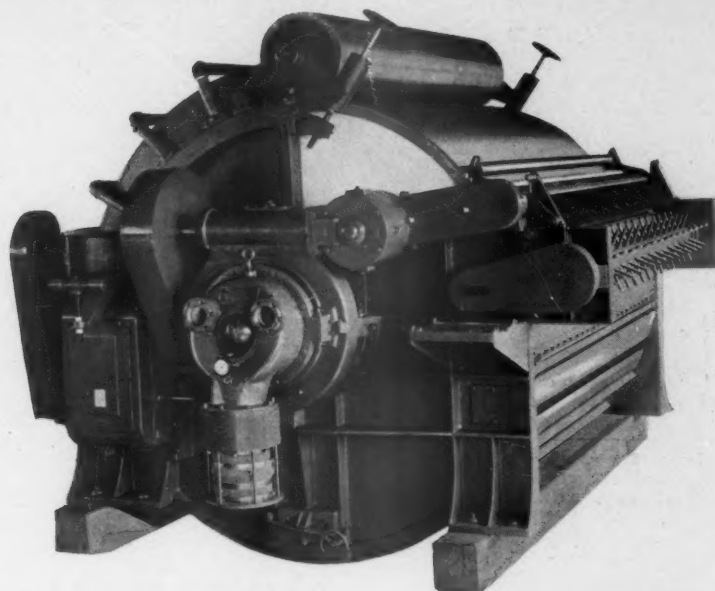
Free drainage without restriction — hence high capacity.

Water passages accessible—smooth surfaces—streamline flow—proper velocity—no accumulation nor sliming. Smooth spiral wound wire support for filter face—maximum drainage—no undercover.

Positive alignment conical valve for sharper cut-off and maximum filtration cycle.

Integral enclosed drives—anti-friction bearings—low power and maintenance costs.

"IMPCO" positive clearance pulp discharger.



Complete sheet removal without abrasion or mechanical wear on face—simplicity facilitates washups.

Stream Line Metallic Water Channels as Standard Equipment. These channels have proven themselves in operation. They are available in various sizes and metals as well as hardened plastics to meet a wide range of flows and corrosive liquors. Washers and Thickeners can be furnished completely RUBBER COVERED for the handling of acid stocks.

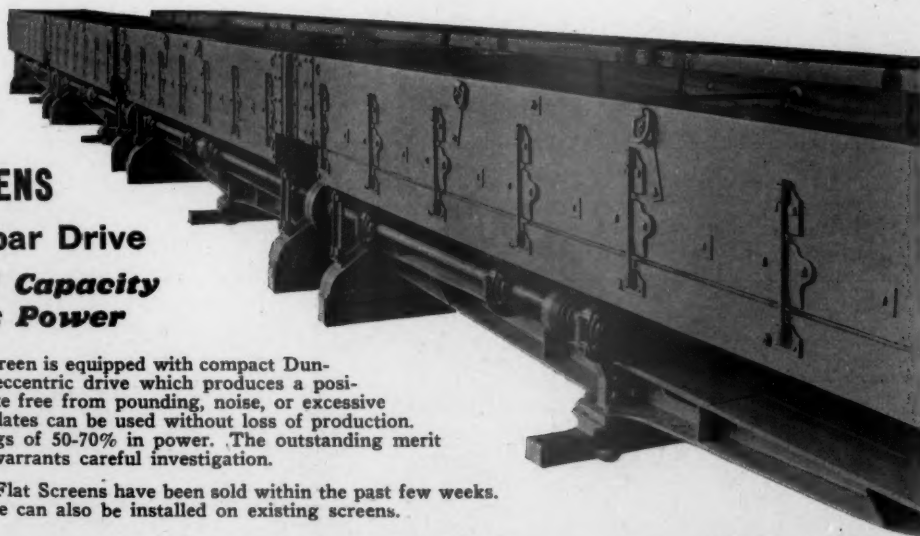
## IMPCO LOW TYPE FLAT SCREENS

**With Dunbar Drive**

**Increased Capacity  
With Less Power**

The "IMPCO" Screen is equipped with compact Dunbar vibrationless eccentric drive which produces a positive uniform stroke free from pounding, noise, or excessive wear. Finer cut plates can be used without loss of production. Tests show savings of 50-70% in power. The outstanding merit of these screens warrants careful investigation.

Over 75 IMPCO Flat Screens have been sold within the past few weeks. The Dunbar Drive can also be installed on existing screens.



**IMPROVED PAPER MACHINERY CORPORATION**  
NASHUA, NEW HAMPSHIRE



## UNITED STATES IMPORTS OF BLEACHED SULPHITE FROM 1920 TO 1933

By Countries of Origin  
(Long Tons of 2,240 Pounds)

Countries—	Canada	Sweden	Germany	Norway	Finland	All Others	Total
1920	86,055	6,788	200	13,435	5,329	2,663	114,470
1921	59,198	5,770	1,335	8,180	7,591	2,931	85,005
1922	122,347	39,340	3,152	39,153	5,393	3,708	213,093
1923	132,138	41,958	12,655	46,849	12,063	4,917	250,580
1924	135,943	64,221	17,054	35,279	6,960	12,912	272,369
1925	137,598	71,577	16,662	48,111	4,130	8,898	286,976
1926	152,764	58,623	25,944	45,416	2,739	9,332	294,818
1927	171,280	46,369	25,341	49,928	4,595	13,617	311,138
1928	176,807	36,237	39,592	40,212	1,500	13,578	307,926
1929	187,469	47,199	45,471	39,312	7,306	7,478	334,235
1930	181,195	43,916	46,101	36,758	7,335	7,358	322,693
1931	185,037	49,063	47,155	18,011	8,922	7,923	316,111
1932	150,589	46,735	38,185	46,971	11,708	24,340	318,528
1933	194,754	65,264	32,564	56,303	22,420	29,328	400,633

Source—Bureau of Foreign and Domestic Commerce, U. S. Department of Commerce.

UNITED STATES  
Imports of Bleached and Unbleached Sulphate—1920 to 1933

By Countries of Origin  
(Long Tons of 2,240 Pounds)

Countries:	Sweden	Canada	Finland	Norway	All Others	Total
1920	25,012	114,175	7,762	3,363	1,236	178,548
1921	57,702	89,729	5,799	522	2,733	159,006
1922	122,545	137,307	23,631	8,850	2,611	294,944
1923	84,739	131,304	20,089	10,258	2,728	249,118
1924	144,148	125,256	17,749	13,080	5,474	305,707
1925	159,282	127,567	21,170	10,568	4,635	323,222
1926	169,810	140,625	25,006	11,798	3,711	350,950
1927	180,897	138,660	19,602	10,690	2,102	351,951
1928	201,757	141,779	32,139	15,761	4,410	395,846
1929	227,760	116,290	31,907	17,079	6,333	399,639
1930	247,361	76,334	35,427	13,072	3,677	338,714
1931	259,238	52,700	55,692	4,385	6,183	378,198
1932	227,226	37,283	45,278	13,285	1,798	324,870
1933	375,583	29,634	49,288	16,513	2,612	473,630

Source: Department of Commerce, Bureau of Foreign and Domestic Commerce.

UNITED STATES  
Wood Pulp Imports—By Grades and Countries of Origin—1933  
(Long Tons of 2,240 lbs.)

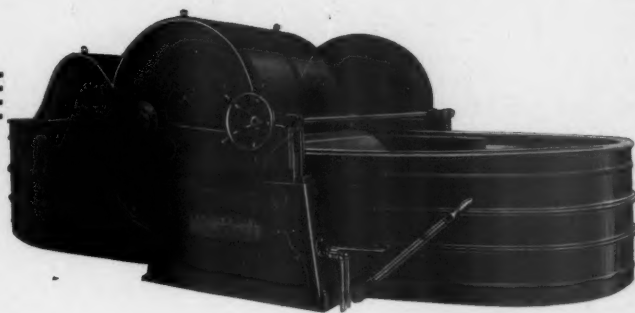
COUNTRY OF ORIGIN							Totals by Grades
Grade—	Canada	Finland	Germany	Norway	Sweden	Others	
Mechanical Wood Pulp	147,742	20,148	150	5,622	13,988	100	187,750
Sulphite—Total	271,291	138,439	76,459	82,900	411,948	62,599	1,043,636
Unbleached	76,537	116,019	43,895	26,597	346,684	33,271	643,003
Bleached	194,754	22,420	32,564	56,303	65,264	29,328	400,633
Sulphate—Total	29,634	49,288	848	16,513	375,583	1,764	473,630
Unbleached	29,634	47,039	848	16,271	366,424	1,764	461,980
Bleached	—	2,249	—	242	9,159	—	11,650
All Other Pulp	28,457	—	5	—	—	266	28,728
Total (By Countries)	477,124	207,875	77,462	105,035	801,519	64,729	1,733,744
Value	\$18,001,772	\$6,453,588	\$2,638,922	\$3,867,528	\$24,096,698	\$2,340,502	\$57,399,010

Source—Import Statistics, U. S. Department of Commerce.



# The New JONES MULTIBEATER

## Attains NEW PEAKS OF PERFORMANCE . . . . .



### Effecting Sweeping Savings!

Revolutionary business changes have created new situations challenging your ability to reduce costs, eliminate inefficiency, and waste.

The vital spot in your mill, where you so often have endeavored to effect important economies, has been your beater room. Now you can definitely reduce your beater room operating costs through the new Jones Multibearer which has absolutely proved its ability to do twice the work of an ordinary beater at less cost. It is the result of several years' intensive study, and only has been announced after thorough tests, and actual successful mill use with definite attainment of new peaks of performance.

In actual mill use, one 1,600 lb. Jones Multibearer replacing one 800 lb. regular type Hollander showed a possible increase in daily production capacity of 220%. Horsepower hours per ton of beaten stock were reduced 62%, saving this mill over \$13.00 per ton in power alone. Required H.P. has been cut approximately 40%, while beating time has been reduced 37½% for double

the former loading capacity, maintaining the same required stock characteristics as before. The beater control is so designed that accurate adjustments to thousandths of an inch may positively be maintained, giving flexibility so that same tackle can be used for writings or blottings. Circulation on 5 to 7% consistency rag stock ranged from 30' to 60' per minute, giving excellent mixing qualities.

No stirring is required as there is no stock lodgment. The beater also can be dumped in 6 minutes with no raking. Automatic beating control can be used, saving labor and giving much desired uniformity of beats as well as saving power and beating time.

### Pacific Coast Supply Co.

SEATTLE—PORTLAND—SAN FRANCISCO

*Exclusive Pacific Coast Representative for the entire line of paper mill products made by*

# Jones

**E. D. JONES & SONS COMPANY - PITTSFIELD, MASS.**  
Builders of High-Grade Machinery for Paper Mills

## PACIFIC PULP &amp; PAPER INDUSTRY

## U. S. WOOD PULP IMPORTS

Quantity and Value

1922 - 1933

	Bleached Sulphite		Unbleached Sulphite		Unbleached Sulphate	
	Long Tons	Value	Long Tons	Value	Long Tons	Value
1933	400,633	\$19,138,468	643,003	\$19,946,124	461,890	\$12,568,367
1932	311,046	14,727,214	508,088	17,047,669	310,659	9,818,674
1931	319,518	18,887,719	540,478	23,033,069	344,612	12,035,030
1930	322,886	22,721,929	665,049	33,193,598	357,551	16,452,381
1929	334,235	25,338,603	701,456	35,328,982	384,005	20,518,676
1928	307,771	23,268,421	640,660	32,587,134	381,256	21,170,948
1927	311,130	24,224,626	613,856	23,262,845	341,162	20,684,298
1926	294,818	23,677,929	628,923	37,032,470	334,803	21,193,459
1925	286,976	22,527,879	579,284	31,542,079	306,073	18,257,446
1924	272,370	21,006,429	562,020	30,092,530	277,994	15,904,350
1923	250,580	22,245,868	461,853	26,548,431	233,696	15,228,747
1922	213,093	17,996,401	422,700	22,297,283	275,504	16,085,121

	Total, All Chemical Pulp		Mechanical Pulp		Total, All Grades Wood Pulp	
	Long Tons	Value	Long Tons	Value	Long Tons	Value
1933	1,545,994	\$54,184,091	187,750	\$ 3,214,919	1,733,744	\$57,399,010
1932	1,154,907	43,652,916	168,272	3,268,457	1,323,179	46,921,373
1931	1,237,600	56,409,638	188,086	4,498,022	1,425,686	60,907,660
1930	1,369,327	74,140,504	267,193	7,146,290	1,636,520	81,286,794
1929	1,441,110	82,840,220	244,162	6,245,776	1,785,272	89,085,996
1928	1,351,005	78,476,280	222,499	5,443,495	1,573,504	83,919,775
1927	1,280,285	80,124,449	219,285	5,961,821	1,499,570	86,086,270
1926	1,278,548	83,208,851	271,213	8,278,220	1,549,761	91,487,071
1925	1,191,875	73,469,063	295,618	8,517,116	1,487,493	81,986,179
1924	1,142,123	68,678,210	219,571	7,190,129	1,361,694	75,868,339
1923	967,869	65,495,800	267,527	9,280,863	1,235,396	74,776,663
1922	931,992	57,600,844	192,688	5,706,529	1,124,680	63,307,373

## PAPER AND PULP EXPORTS OF THE UNITED STATES

For the Twelve Months Ending Dec. 31, 1932 and 1933

## PAPER EXPORTS

Articles—	12 Months, Ending Dec., 1933—		12 Months, Ending Dec., 1932—	
	Quantity	Dollars	Quantity	Dollars
Paper and Manufactures		14,599,007		15,407,559
Printing paper—				
Newsprint paper	lbs. 22,296,879	456,808	16,927,992	447,896
Book paper, not coated	lbs. 18,382,509	862,848	14,963,103	787,094
Cover paper	lbs. 823,732	103,688	1,084,918	130,974
Grease proof and waterproof paper	lbs. 4,717,517	763,129	4,194,812	871,911
Overissue and old newspapers	lbs. 143,607,766	1,059,738	209,151,107	1,472,722
Wrapping paper	lbs. 24,373,666	1,249,810	19,260,320	1,317,011
Surface-coated paper	lbs. 6,130,350	617,219	6,060,851	677,898
Tissue and crepe paper	lbs. 3,815,430	544,164	3,676,093	554,128
Toilet paper	lbs. 6,636,325	534,450	6,053,997	542,436
Paper towels and napkins	lbs. 1,601,396	137,352	2,130,778	202,218
Box board (paper board and strawboard)	lbs. 44,632,705	946,289	37,504,905	660,469
Bristols and bristol board	lbs. 1,333,946	90,116	1,651,698	111,448
Other paper board	lbs. 18,927,779	663,099	24,725,223	814,086
Sheathing and building paper	lbs. 7,215,510	176,642	6,997,166	187,325
Fiber insulating board or bat	sq. ft. 32,985,083	852,261	24,891,109	641,595
Wall board of paper or pulp	sq. ft. 9,826,006	243,172	6,714,857	181,721
Blotting paper	lbs. 1,583,377	148,162	1,092,594	117,036
Filing folders, index cards, and other office forms	lbs. 843,449	271,715	972,047	311,256
Papeteries (fancy writing paper)	lbs. 128,088	28,794	192,612	44,503
Other writing paper	lbs. 13,526,825	884,430	12,529,315	859,236
Paper hangings (wall paper)	rolls 781,375	64,141	766,182	79,885
Paper bags	lbs. 10,917,815	529,522	8,571,418	485,158
Boxes and cartons	lbs. 6,929,100	443,734	11,180,498	628,046
Envelopes	lbs. 921,438	128,882	1,063,075	148,536
Vulcanized fiber sheets, strips, rods and tubes	lbs. 2,801,358	726,727	2,245,793	666,489
Cash-register and adding-machine paper	lbs. 2,570,663	202,593	4,898,065	354,666
Other paper and paper products		1,869,522		2,111,816

## PAPER BASE STOCK EXPORTS

Article—	12 Months, Ending Dec., 1933—		12 Months, Ending Dec., 1932—	
	Quantity	Dollars	Quantity	Dollars
Paper base stock		3,861,967		2,707,277
Pulpwoods	cords 10,737	68,322	28,405	177,327
Wood pulp—				
Sulphite wood pulp	tons 68,897	3,048,542	40,944	1,962,538
Soda wood pulp	tons 680	33,883	1,104	65,331
Other wood pulp	tons 1,130	31,458	685	9,684
Rags and other paper stock	lbs. 74,504,798	679,762	73,922,728	492,397

**F. C. HUYCK & SONS**  
**KENWOOD MILLS**  
**ALBANY, N.Y.**

*Manufacturers*  
*of*  
**KENWOOD FELTS**  
*and JACKETS for*  
**ALL PULP and PAPER**  
**MAKING PURPOSES**

*Since 1870*



## PACIFIC PULP &amp; PAPER INDUSTRY

**UNITED STATES**  
**Paper and Woodpulp Production and Consumption**  
**Consumption of Domestic and Imported Pulpwood and Total Pulpwood Consumption**  
 Specified Years, 1899-1933

Year—	PAPER		WOODPULP		CONSUMPTION OF PULPWOOD		
	Production (tons)	Consumption (tons)	Production (tons)	Consumption (tons)	Domestic (cords)	Imported (cords)	Total (cords)
1899	2,167,593	2,158,000	1,179,525	1,216,254	1,617,093	369,217	1,986,310
1904	3,106,696	3,049,824	1,921,768	2,091,006	2,477,099	573,618	3,050,717
1909	4,216,708	4,224,000	2,495,523	2,856,593	3,207,653	793,954	4,001,607
1914	5,270,047	5,496,164	2,893,150	3,556,377	3,641,063	829,700	4,470,763
1917	5,919,647	6,255,725	3,509,939	4,148,600	4,706,327	773,748	5,480,075
1918	6,051,523	6,387,066	3,313,861	3,869,746	4,506,276	744,518	5,250,794
1919	6,190,361	6,479,490	3,517,952	4,113,911	4,445,817	1,032,015	5,477,832
1920	7,334,614	7,846,827	3,821,704	4,696,035	5,014,513	1,099,559	6,114,072
1921	5,356,317	6,053,915	2,875,601	3,544,218	3,740,406	816,773	4,557,179
1922	7,017,800	8,007,088	3,521,644	4,756,105	4,498,808	1,050,034	5,548,842
1923	8,029,482	9,339,573	3,788,672	5,149,695	4,636,789	1,236,081	5,872,870
1924			3,723,266	5,216,265	4,720,191	1,047,891	5,768,082
1925	9,182,204	10,590,090	3,962,217	5,590,304	5,005,445	1,088,376	6,093,821
1926			4,394,766	6,096,279	5,489,517	1,276,490	6,766,007
1927	10,002,070	11,915,233	4,313,403	5,960,865	5,526,889	1,224,046	6,750,935
1928	10,403,338	12,447,841	4,510,800	6,239,641	5,750,689	1,409,411	7,160,100
1929	11,140,235	13,347,925	4,862,885	6,704,341	6,411,566	1,233,445	7,645,011
1930	10,169,140	12,314,819	4,630,308	6,463,185	6,089,852	1,105,672	7,195,524
1931	9,381,840	11,403,850	4,409,344	6,005,718	5,896,446	826,320	6,722,766
1932	7,997,872	9,733,764	3,760,267	5,083,446	4,891,424	741,699	5,633,123
1933†	8,893,000	10,622,374	4,241,500	5,975,244	5,776,792	723,208§	6,500,000

Source: Bureau of the Census, Federal Trade Commission, United States Forest Service and A. P. & P. A.

Cords: 128 cubic feet.

\*Pulpwood requirement is a computed figure which represents the pulpwood required to manufacture the total paper consumption of a year.

§Not strictly comparable with other data under same head. Refers to wood actually imported during the year, whereas other figures refer to imported wood actually consumed during year.

†Estimated.

**UNITED STATES**  
**Total Domestic Woodpulp Production, by Grades, From 1899 to 1933**  
 In Tons of 2,000 Lbs.

Year	Total	Groundwood	Sulphite	Soda	Sulphate
1933	10,421,500	1,202,000	1,340,500	344,000	1,255,000
1932	3,760,267	1,203,044	1,145,639	290,703	1,028,846
1931	4,409,344	1,449,240	1,416,671	460,682	1,034,291
1930	4,630,308	1,360,221	1,567,063	504,443	949,513
1929	4,862,885	1,637,653	1,668,707	561,210	910,888
1928	4,510,800	1,615,689	1,595,951	488,641	780,552
1927	4,313,403	1,618,638	1,588,132	487,478	607,172
1926	4,394,766	1,774,192	1,599,776	496,920	523,878
1925	3,962,217	1,629,689	1,447,191	472,647	412,690
1924	3,723,266	1,643,283	1,336,351	440,697	302,735
1923	3,788,672	1,580,553	1,448,690	445,162	314,267
1922	3,521,644	1,483,787	1,374,319	419,837	243,681
1921	2,875,601	1,267,382	1,166,926	300,533	140,760
1920	3,821,704	1,583,914	1,585,834	463,305	188,651
1919	3,517,952	1,518,829	1,419,829	411,693	120,378
1918	3,313,861	1,364,504	1,456,633	350,362	142,362
1917	3,509,939	1,535,953	1,451,757	437,430	84,799
1916	3,435,001	1,508,139	1,466,402	387,021	73,439
1914	2,893,150	1,293,661	1,151,327	347,928	52,641
1911	2,686,134				
1910	2,533,976				
1909	2,495,523	1,179,266	1,017,631	298,626	
1908	2,118,947				
1907	2,547,879				
1904	1,921,768	968,976	756,976	196,770	
1899	1,179,525	586,374	416,037	177,114	

1933 production estimated by A. P. & P. A.

§Includes 48,460 tons of screenings as follows: mechanical, 10,115; chemical, 38,345.

†Includes 49,068 tons of screenings, as follows: mechanical, 6,611; chemical, 42,457.

\*Not reported separately.

†Includes 64,427 tons of screenings, as follows: mechanical, 11,459; chemical, 52,968.

†Includes data for screenings, as follows: Mechanical, 4,701 tons; sulphite, 37,093; sulphate, 6,327.

†Includes data for screenings, as follows: Mechanical, 8,229 tons; sulphite, 35,433; sulphate, 3,919.

†Includes data for screenings as follows: Mechanical, 9,944 tons; sulphite, 41,601; sulphate, 3,918.

†Includes data for screenings as follows: Mechanical, 17,670 tons; sulphite, 44,105; sulphate, 2,922.

†Includes data for some screenings.

†Includes data for screenings as follows: Mechanical, 12,759 tons; sulphite, 37,463; sulphate, 1,784.

†Includes data for screenings as follows: Mechanical, 12,220 tons; chemical, not shown by process, 35,003.

†Includes data for screenings as follows: Mechanical, 11,769 tons; chemical, not shown by process, 35,824.

\*Includes 92,035 tons screenings and semi-chemical.

†Includes 75,000 tons semi-chemical and 25,000 tons screenings.

Source: U. S. Department of Commerce.

**UNITED STATES**  
**Wood Pulp Imports—Grade Totals—1899-1921**  
 (In Tons of 2,000 Lbs.)

Year	Total	Groundw'd	Total Sulphite	Total Sulphate
1921	697,100	190,744	328,270	178,086
1920	906,297	233,148	473,175	199,974
1919	636,016	202,253	282,707	151,056
1918	578,209	185,478	270,211	122,520
1917	677,841	279,073	289,210	109,558
1916	683,765	262,517		
1915	568,379	174,056		
1914	675,564	217,256		
1913	541,455	167,889		
1912	539,790	185,443		
1911	562,424	262,681		
1910	506,776	224,184		
1909	370,023	145,362		
1908	250,485	71,217		
1907	296,778			
1906	199,702			
1905	170,867			
1904	179,324			
1899	57,335			

Source: U. S. Department of Commerce.

**PULPWOOD IMPORTS**  
 (Unit: 1 Cord—128 Cu. Ft.)

	Rough	Peeled	Rossed	Total
1933	119,852	591,812	11,544	723,208
1932	114,366	531,158	2,664	648,188
1931	186,613	817,926	17,128	1,021,667
1930	331,158	1,234,678	16,365	1,582,201

Source: Department of Commerce, Bureau of Foreign and Domestic Commerce.



# UNIFORM SUPERIOR QUALITY ♦ SULPHITE PULP



*Rail and Cargo  
Shipments*

PULP DIVISION

## WEYERHAEUSER TIMBER COMPANY

LONGVIEW • WASHINGTON

## PACIFIC PULP &amp; PAPER INDUSTRY

## UNITED STATES

## Pulpwood Consumption and Wood-Pulp Production, by States—1926-1932

## Quantity and Cost of Wood Consumed

## Quantity of Pulp Produced

Source: Census of Manufactures.

(Statistics are given for all States for which separate figures can be published without disclosing, exactly or approximately, the data reported by individual establishments. Certain of the "Other States," however, are more important in the industry than some of the States shown separately).

States—	Year	Wood Consumed		Average per cord	Wood Pulp produced (tons of 2,000 lbs.)
		Quantity (cords)	Cost f.o.b. Mill		
United States	1932	5,633,123	\$51,769,093	\$9.19	3,760,267
	1931	5,622,766	\$53,524,059	\$10.94	4,409,344
	1930	7,195,524	88,683,502	12.32	4,630,308
	1929	7,645,011	100,054,139	13.09	4,862,885
	1928	7,160,100	97,024,190	13.55	4,510,800
	1927	6,750,935	95,452,365	14.29	4,313,403
	1926	6,766,007	101,229,402	14.96	4,394,766
Individual States:					
Maine	1932	948,749	13,000,940	13.70	764,834
	1931	1,122,368	17,326,636	15.38	889,416
	1930	1,203,377	19,833,906	16.48	905,088
	1929	1,311,577	22,281,806	16.99	981,433
	1928	1,309,988	22,602,624	17.25	970,690
	1927	1,273,268	21,890,760	17.16	942,162
	1926	1,298,357	22,619,373	17.42	945,790
Wisconsin	1932	769,591	7,502,919	9.75	476,228
	1931	956,659	11,319,105	11.83	586,271
	1930	1,168,789	14,710,447	12.59	701,011
	1929	1,233,962	15,632,746	12.67	733,617
	1928	1,225,630	15,869,381	12.95	720,781
	1927	1,199,615	15,174,013	12.65	690,921
	1926	1,224,443	15,711,665	12.83	712,565
Washington	1932	688,326	4,354,452	6.70	420,529
	1931	1,025,878	7,252,770	7.07	580,016
	1930	1,000,001	6,883,484	6.88	566,137
	1929	956,132	6,527,585	6.83	523,948
	1928	651,657	4,781,566	7.34	349,107
	1927	445,664	3,588,506	8.05	268,349
	1926	305,787	2,775,122	9.08	199,164
New York	1932	437,640	6,843,337	15.64	353,867
	1931	583,370	10,368,934	17.81	446,510
	1930	763,451	14,200,286	18.60	596,219
	1929	826,312	15,987,105	19.35	662,988
	1928	802,115	14,962,631	18.65	633,182
	1927	872,780	16,882,733	19.34	710,227
	1926	990,701	19,350,874	19.53	822,131
Louisiana	1932	449,151	1,759,642	3.92	289,021
	1931	431,425	2,047,236	4.75	260,765
	1930	422,710	2,385,417	5.64	243,915
	1929	459,553	2,671,881	5.81	246,590
	1928	413,602	2,429,247	5.87	226,708
	1927	349,272	2,056,671	5.89	179,878
	1926	258,439	1,674,651	6.48	137,571
Pennsylvania	1932	237,486	3,409,198	14.35	130,149
	1931	292,615	4,662,606	15.93	160,023
	1930	352,775	5,703,253	16.17	188,943
	1929	397,680	6,930,456	17.43	213,083
	1928	405,276	7,016,656	17.31	218,598
	1927	398,021	7,171,606	18.02	216,587
	1926	425,684	7,171,764	16.85	233,258
Oregon	1932	265,470	1,737,597	6.54	187,133
	1931	319,876	2,584,712	8.08	237,532
	1930	351,053	2,963,962	8.44	248,592
	1929	340,745	3,157,499	9.27	256,546
	1928	308,264	3,094,255	10.04	213,407
New Hampshire	1930	242,756	4,527,619	18.65	138,332
	1929	376,014	7,375,455	19.61	212,774
	1928	351,349	6,843,713	19.48	198,587
	1927	358,376	6,958,956	19.42	200,324
	1926	431,138	8,969,404	20.80	248,600
Virginia	1932	337,585	2,613,496	7.75	207,660
	1931	368,030	3,049,937	8.29	223,417
	1930	378,421	3,812,361	10.07	216,365
	1929	375,179	4,143,285	11.04	206,050
	1928	342,813	3,942,477	11.50	189,925
	1927	316,032	3,775,393	11.95	170,630
	1926	317,058	4,032,829	12.72	163,506
Michigan	1932	216,285	1,682,232	7.77	153,323
	1931	251,197	2,937,046	11.69	150,111
	1930	279,986	3,725,080	13.40	193,418
	1929	313,477	4,422,317	14.11	178,015
	1928	331,697	4,634,972	13.97	196,203
	1927	351,688	4,712,584	13.40	193,539
	1926	331,570	5,136,117	15.49	200,604
Minnesota	1932	211,245	1,825,524	8.64	134,509
	1931	197,587	2,118,058	10.72	148,369
	1930	230,471	2,688,294	11.66	182,456
	1929	266,320	2,780,312	10.44	189,664
	1928	282,691	3,365,081	11.90	194,399
	1927	281,156	3,397,201	12.08	191,220
	1926	288,390	3,269,903	11.34	190,454

Vermont	1931	24,633	326,546	13.26	25,601
	1930	24,224	362,784	15.02	25,047
	1929	25,486	447,168	17.55	26,307
	1928	20,081	330,702	16.47	19,831
	1927	31,795	549,741	17.29	32,562
	1926	48,554	937,464	19.31	46,376
Massachusetts	1932	20,420	280,379	13.74	14,210
	1931	33,438	535,918	16.03	23,785
Other States <sup>2</sup>	1932	1,024,175	6,759,177	6.60	628,804
	1931	1,125,690	8,974,555	7.97	657,528
	1930	734,110	6,116,411	8.33	395,407
	1929	717,474	6,909,782	9.63	402,378
	1928	663,612	6,176,561	9.31	347,012

<sup>1</sup>Includes data for small quantity of spent licorice root with no market value.

<sup>2</sup>Includes data for a small quantity of spent licorice root of no market value.

<sup>3</sup>Alabama, Arkansas, Delaware, Florida, Maryland, Mississippi, New Hampshire, New Jersey, North Carolina, Ohio, South Carolina, Tennessee, West Virginia and Vermont.

<sup>4</sup>1931 and 1932 figures included in other states.

<sup>5</sup>1932 figures included in other states.

WOOD-PULP PRODUCTION, BY STATES  
1931-1932

(Revised)

Source: Department of Commerce.

United States	Wood pulp produced (tons of 2,000 lbs.)	
	1931	1932
United States	4,409,344	3,760,267
State—		
Louisiana	260,765	289,021
Maine	889,416	764,834
Massachusetts	23,785	14,210
Michigan	150,111	153,323
Minnesota	148,369	134,509
New York	466,510	353,867
Oregon	237,532	187,133
Pennsylvania	160,023	130,149
Vermont	25,601	included in <sup>1</sup>
Virginia	223,417	207,660
Washington	580,016	420,529
Wisconsin	586,271	476,228
Other States	657,528	628,804

<sup>1</sup>Combined to avoid disclosing, exactly or approximately, the output of individual establishments.

## PULPWOOD CONSUMPTION—QUANTITY, BY STATES—1931-1932

Source: Department of Commerce

This table presents statistics for all States for which separate figures can be published without disclosing, exactly or approximately, the data reported by individual establishments. Certain of the "Other States", however, are more important in the industry than some of the States shown separately.

United States	Total quantity consumed—	
	1931 (cords)	1932 (cords)
United States	6,722,766	5,633,123
State—		
Louisiana	431,425	449,151
Maine	1,112,368	948,749
Massachusetts	33,438	20,420
Michigan	251,197	216,285
Minnesota	197,587	211,245
New Hampshire	150,568	included in <sup>1</sup>
New York	538,370	437,640
Oregon	319,876	265,470
Pennsylvania	292,615	237,486
Vermont	24,633	included in <sup>1</sup>
Virginia	368,030	337,585
Washington	1,025,878	688,326
Wisconsin	956,659	796,591
Other States <sup>1</sup>	975,122	1,024,175

<sup>1</sup>Alabama, Arkansas, Delaware, Florida, Maryland, Mississippi, New Jersey, North Carolina, Ohio South Carolina, Tennessee, West Virginia, (New Hampshire and Vermont for 1932.)

# When *Quality* Counts

paper mills everywhere  
are insisting on the

*high*  
*grade*  
*bleached*  
*sulphite*  
*pulps*

made by three modern  
Pacific Coast mills:

**RAINIER PULP & PAPER CO.**

Shelton, Washington

**GRAYS HARBOR PULP & PAPER CO.**

Hoquiam, Washington

**OLYMPIC FOREST PRODUCTS CO.**

Port Angeles, Washington

Annual tonnage available  
in excess of 125,000 tons.

## PACIFIC PULP &amp; PAPER INDUSTRY

## NEWSPRINT EXPORTS FROM CANADA

To:	1931 Tons	1932 Tons	1933 Tons
United Kingdom .....	104,027	87,215	107,041
South America .....	56,333	53,274	50,061
South Africa .....	14,744	9,921	
Australia .....	29,502	39,492	64,435
New Zealand .....	14,673	12,210	
U. S. A. ....	1,753,414	1,520,294	1,519,680
All other .....	35,544	59,357	96,594
<b>Total .....</b>	<b>2,008,237</b>	<b>1,781,763</b>	<b>1,838,106</b>

NEWS PRINT PRODUCTION IN NORTH  
AMERICA—1923-1933

Source—News Print Service Bureau

## Canadian Mills

	Production Tons
1933—Twelve Months .....	2,017,004
1932— " " .....	1,914,316
1931— " " .....	2,221,454
1930— " " .....	2,504,147
1929— " " .....	2,728,827
1928— " " .....	2,381,102
1927— " " .....	2,086,949
1926— " " .....	1,881,737
1925— " " .....	1,522,217
1924— " " .....	1,352,994
1923— " " .....	1,266,232

## United States Mills

1933—Twelve Months .....	946,374
1932— " " .....	1,008,588
1931— " " .....	1,157,436
1930— " " .....	1,282,372
1929— " " .....	1,392,276
1928— " " .....	1,417,572
1927— " " .....	1,485,495
1926— " " .....	1,684,218
1925— " " .....	1,530,318
1924— " " .....	1,481,425
1923— " " .....	1,485,000

## United States and Canadian Mills

1933—Twelve Months .....	2,963,378
1932— " " .....	2,922,904
1931— " " .....	3,378,890
1930— " " .....	3,786,519
1929— " " .....	4,121,103
1928— " " .....	3,798,674
1927— " " .....	3,572,444
1926— " " .....	3,565,955
1925— " " .....	3,052,535
1924— " " .....	2,834,419
1923— " " .....	2,751,232

## NEWS PRINT IN THE UNITED STATES, 1913-1933

	(Tons)				
Year	Production	Imports	Exports	Balance at Home	
1913 .....	1,305,000	220,000	43,000	1,482,000	
1914 .....	1,313,000	315,000	61,000	1,567,000	
1915 .....	1,239,000	368,000	55,000	1,552,000	
1916 .....	1,315,000	468,000	76,000	1,707,000	
1917 .....	1,359,000	559,000	94,000	1,824,000	
1918 .....	1,260,000	596,000	97,000	1,759,000	
1919 .....	1,375,000	628,000	111,000	1,892,000	
1920 .....	1,512,000	730,000	49,000	2,193,000	
1921 .....	1,225,000	792,000	17,000	2,000,000	
1922 .....	1,448,000	1,029,000	26,000	2,451,000	
1923 .....	1,485,000	1,309,000	16,000	2,778,000	
1924 .....	1,481,000	1,357,000	17,000	2,821,000	
1925 .....	1,530,000	1,448,000	23,000	2,955,000	
1926 .....	1,684,000	1,851,000	19,000	3,516,000	
1927 .....	1,486,000	1,984,000	12,000	3,458,000	
1928 .....	1,418,000	2,157,000	11,000	3,564,000	
1929 .....	1,392,000	2,421,000	19,000	3,794,000	
1930 .....	1,282,000	2,280,000	10,000	3,552,000	
1931 .....	1,157,000	2,067,000	10,000	3,214,000	
1932 .....	1,047,000	1,791,000	8,000	2,830,000	
1933 .....	977,000	1,793,000	11,000	2,759,000	

## NEWS PRINT IN CANADA, 1913-1933

	(Tons)				
Year	Production	Exports	Balance at Home		
1913 .....	350,000	*	*		
1914 .....	415,000	*	*		
1915 .....	489,000	*	*		
1916 .....	608,000	*	*		
1917 .....	686,000	*	*		
1918 .....	735,000	*	*		
1919 .....	803,000	708,000	95,000		
1920 .....	876,000	762,000	114,000		
1921 .....	808,000	709,000	99,000		
1922 .....	1,082,000	960,000	122,000		
1923 .....	1,266,000	1,138,000	128,000		
1924 .....	1,353,000	1,219,000	134,000		
1925 .....	1,522,000	1,402,000	120,000		
1926 .....	1,882,000	1,732,000	150,000		
1927 .....	2,087,000	1,882,000	205,000		
1928 .....	2,381,000	2,207,000	174,000		
1929 .....	2,729,000	2,511,000	218,000		
1930 .....	2,504,000	2,331,000	173,000		
1931 .....	2,221,000	2,008,000	213,000		
1932 .....	1,915,000	1,782,000	133,000		
1933 .....	2,017,000	1,838,106	179,000		

\*No data.

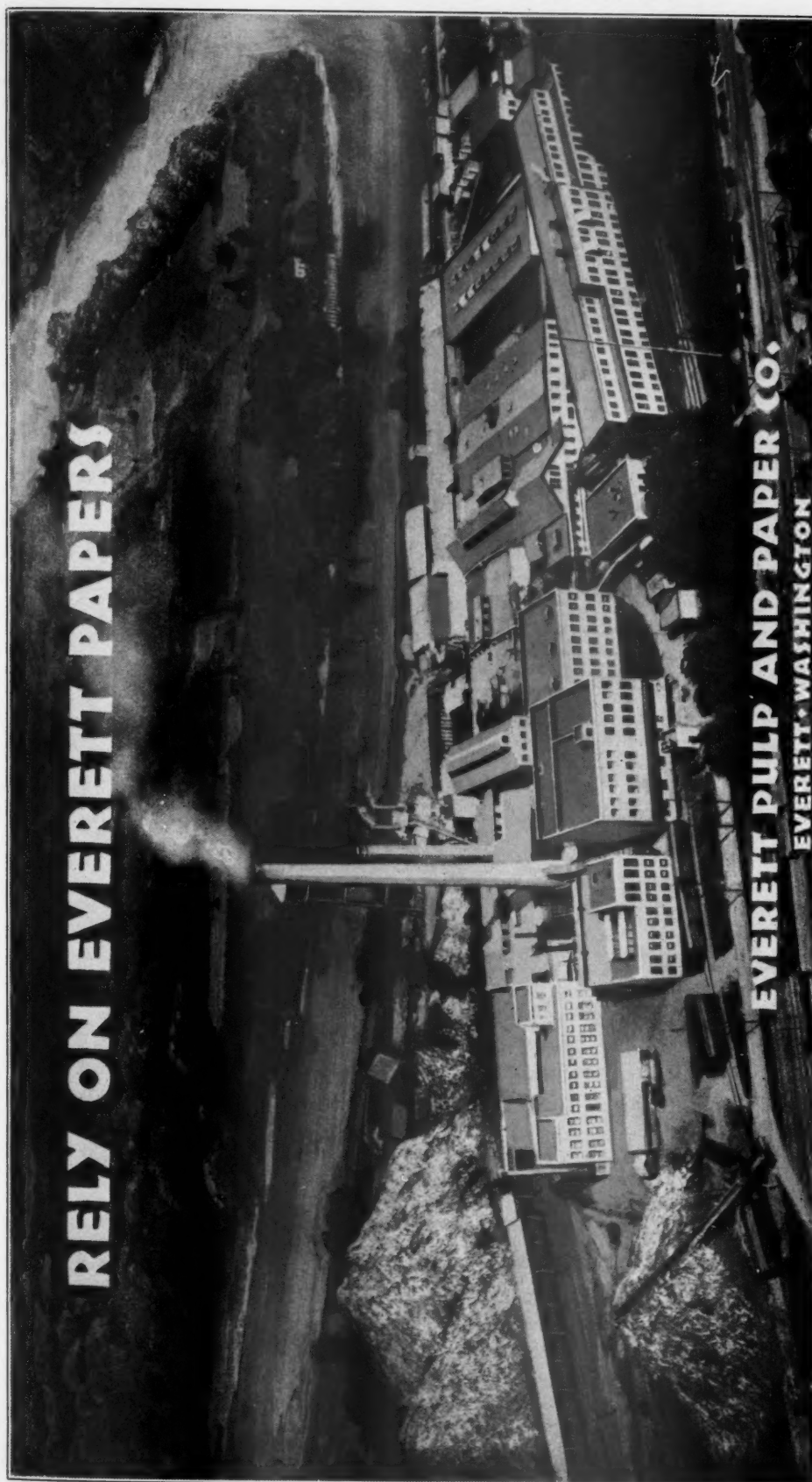
BRITISH COLUMBIA  
Principal Production Statistics  
1932

	Quantity	Value
Pulpwood produced .....	cords 320,050	\$2,490,777
Pulpwood consumed .....	cords 304,185	2,426,210
Wood pulp produced .....	tons 259,586	4,911,874
Wood pulp consumed .....	tons 238,578	3,772,663
Paper produced .....	tons 228,075	9,636,283

## NORTH AMERICAN PRODUCTION

	Canada	United States	Newfoundland	Mexico	Total
1933—Twelve Months .....	2,017,004	946,374	270,834	16,367	3,250,579
1932— " " .....	1,914,316	1,008,588	271,804	12,683	3,207,391
1931— " " .....	2,221,454	1,157,436	294,983	15,195	3,689,068
1930— " " .....	2,504,147	1,282,372	287,259	14,286	4,088,064
1929— " " .....	2,728,827	1,392,276	255,501	18,680	4,395,284
1928— " " .....	2,381,102	1,417,572	230,745	16,981	4,046,400
1927— " " .....	2,086,949	1,485,495	202,852	14,137	3,789,433
1926— " " .....	1,881,737	1,684,218	186,471	13,412	3,765,838
1925— " " .....	1,522,217	1,530,318	96,588	12,681	3,161,804
1924— " " .....	1,352,994	1,481,425	64,648	11,500	2,910,567
1923— " " .....	1,266,232	1,485,000	63,906	12,000	2,827,138





PIONEER PACIFIC COAST MANUFACTURERS OF

■ BOOK PAPERS, WRITING PAPERS and SPECIALTIES ■

Our Converting Department manufactures Tablets, Composition Books, Commercial Stationery and School Supplies

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## PACIFIC PULP &amp; PAPER INDUSTRY

## WORLD PRODUCTION OF NEWSPRINT PAPER—1927 TO 1933\*

(Short tons of 2,000 lbs.)

Countries—	1927 Tons	1928 Tons	1929 Tons	1930 Tons	1931 Tons	1932 Tons	1933 Tons
Canada	2,087,000	2,381,000	2,729,000	2,504,000	2,221,000	1,919,000	2,017,000
United States	1,486,000	1,405,000	1,392,000	1,282,000	1,157,000	1,047,000	977,000
Great Britain	615,000	646,000	637,000	608,000	719,000	780,000	800,000
Germany	565,000	600,000	623,000	590,000	540,000	442,000	372,000
Newfoundland	203,000	231,000	256,000	287,000	295,000	272,000	271,000
Sweden	239,000	234,000	275,000	240,000	265,000	267,000	230,000
Japan	246,000	267,000	286,000	285,000	258,000	272,000	304,000
France	121,000	136,000	210,000	240,000	243,000	275,000	285,000
Finland	200,000	214,000	217,000	223,000	241,000	254,000	280,000
Norway	192,000	198,000	189,000	202,000	104,000	192,000	160,000
Russia <sup>1</sup>	10,000	7,000	48,000	90,000	(?) 100,000	(?) 125,000	150,000(?)
Netherlands	77,000	76,000	77,000	84,000	79,000	85,000	85,000
Italy	42,000	45,000	52,000	69,000	69,000	74,000	75,000
Austria	50,000	57,000	62,000	64,000	62,000	49,000	45,000
Spain	25,000	26,000	30,000	32,000	62,000	65,000	70,000
Switzerland	40,000	40,000	48,000	47,000	49,000	45,000	50,000
Belgium	50,000	50,000	57,000	50,000	44,000	40,000	40,000
Czechoslovakia	45,000	45,000	47,000	44,000	42,000	40,000	35,000
Poland	17,000	20,000	23,000	27,000	27,000	23,000	25,000
Estonia	21,000	20,000	27,000	29,000	17,000	6,000	10,000
Mexico	14,000	17,000	19,000	14,000	15,000	13,000	16,000
Denmark	16,000	16,000	11,000	10,000	10,000	9,000	10,000
Latvia	3,000	3,000	4,000	4,000	3,000	5,000	5,000
<b>Total</b>	<b>6,364,000</b>	<b>6,744,000</b>	<b>7,319,000</b>	<b>7,025,000</b>	<b>6,622,000</b>	<b>6,309,000</b>	<b>5,940,000</b>

<sup>1</sup>Russian figures admittedly incomplete.

\*Compiled by The Newsprint Service Bureau from composite of reports direct to their office, information from foreign correspondents and data from the U. S. Department of Commerce. Some 1933 figures are estimates.

UNITED STATES  
Newsprint Imports—1933

From—	Tons (2,000 lbs.)
Finland	56,526
Germany	12,013
Norway	16,557
Sweden	68,062
Canada	1,545,293
Newfoundland	94,944
Other	63
<b>Total</b>	<b>1,793,458</b>

IMPORTS OF EUROPEAN NEWS PRINT INTO THE U. S.  
January 1, 1920—December 31, 1933 (Tons of 2,000 lbs.)

	Sweden	Germany	Finland	Norway	Other	Total
1920	18,875	21,066	3,244	5,916	1,337	50,438
1921	48,932	38,938	22,661	20,193	4,613	135,337
1922	51,812	32,838	26,205	17,292	4,741	132,888
1923	64,570	52,290	41,782	33,829	7,798	200,269
1924	60,827	38,840	35,639	17,259	3,238	155,803
1925	63,518	25,862	21,683	17,030	2,421	132,514
1926	46,020	12,884	34,292	6,176	554	99,926
1927	66,920	7,096	29,330	16,796	1,919	122,061
1928	55,718	9,170	40,237	10,864	418	116,407
1929	50,717	9,741	32,293	3,498	124	96,373
1930	69,268	13,788	41,913	9,326	—	134,295
1931	66,688	21,910	47,992	14,444	35	151,069
1932	60,079	13,614	48,795	24,653	—	147,141
1933	68,062	12,013	36,526	16,557	—	133,158
<b>Total 14 years</b>	<b>794,006</b>	<b>310,050</b>	<b>482,592</b>	<b>213,833</b>	<b>27,198</b>	<b>1,827,679</b>
<b>Percent (Average)</b>	<b>43.4</b>	<b>16.9</b>	<b>26.4</b>	<b>11.6</b>	<b>1.4</b>	<b>100.0</b>

UNITED STATES  
Wood Pulp Imports — By Grades and Countries of Origin — 1932  
(Long Tons of 2,240 lbs.)

Grade—	COUNTRY OF ORIGIN						Totals by Grades
	Canada	Finland	Germany	Norway	Sweden	Others	
Mechanical Wood Pulp	133,960	16,600	—	7,664	9,865	183	168,272
Sr <sup>l</sup> phite—Total	206,924	107,287	80,515	78,373	317,629	44,007	834,735
Unbleached	56,335	95,579	42,330	31,402	270,894	19,667	516,207
Bleached	150,589	11,708	38,185	46,971	46,735	24,340	318,528
Sulphate—Total	37,283	45,278	482	13,285	227,226	1,316	324,870
Unbleached	17,411	43,756	482	12,961	225,578	1,316	301,504
Bleached	19,872	1,522	—	324	1,648	—	23,366
All Other Pulp	1,569	—	—	—	—	—	1,569
<b>Total (By Countries)</b>	<b>379,736</b>	<b>169,165</b>	<b>80,997</b>	<b>99,322</b>	<b>554,720</b>	<b>45,506</b>	<b>1,329,446</b>

Source—Import Statistics, U. S. Department of Commerce.

“... and I say to you, gentlemen, that now, with paper costs fixed, the manufacturer who is not equipped to produce paper as good and as cheap as his competitor cannot hope to survive...”

The

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Corporation



2860 Northwest Front Avenue, Portland Oregon

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## PACIFIC PULP &amp; PAPER INDUSTRY

## UNITED STATES

## Box Board—Production, Shipments, Etc.

Year and Month—1933	—Operation—(Inch hours) <sup>1</sup> — (Based on last dryer width)			—Production—(Short tons)—			New orders (Short tons)	Unfilled orders end month (Short tons)
	Rated Capacity	Operated	Per Cent of Capacity	Rated Capacity	Output	Per Cent of Capacity		
January	14,210,696	7,679,402	54.0	392,770	205,326	52.3	207,214	36,065
February	12,560,626	7,572,068	60.3	350,350	205,871	58.8	207,705	38,505
March	15,472,220	8,758,969	56.6	432,799	237,536	54.9	250,480	53,542
April	13,761,134	8,185,670	59.5	384,846	223,845	58.2	236,022	70,099
May	14,888,820	10,418,818	70.0	417,798	287,032	68.7	294,460	76,719
June	13,695,506	10,432,158	76.2	384,283	292,967	76.2	349,650	144,307
July	12,925,903	10,230,022	79.1	358,378	283,272	79.0	268,546	128,638
August	14,403,798	11,228,582	78.0	404,838	312,747	77.3	307,321	118,298
September	12,969,506	9,265,645	71.4	357,093	252,452	70.7	238,771	105,423
October	13,553,121	8,161,859	60.2	380,201	228,416	60.1	185,026	62,177
November	13,711,706	7,523,076	54.9	382,320	206,933	54.1	199,059	55,080
December	13,441,090	6,530,001	48.6	374,054	176,337	47.1	169,116	48,920
Total (Year 1933)	165,594,126	105,986,270	64.0	4,619,730	2,912,374	63.0	2,913,370	-----
Total (Year 1932)	138,115,824	75,979,629	55.0	3,904,824	2,152,045	55.1	2,148,991	-----
Total (Year 1931)	137,218,968	91,894,961	67.0	3,879,836	2,556,851	65.9	2,527,024	-----
Total (Year 1930)	139,179,840	96,843,592	69.6	3,917,436	2,699,595	68.9	2,685,373	-----

Year and Month—1933	Shipments of box board <sup>2</sup>	Stocks of Box Board end of month <sup>2</sup>	Consumption of Waste Paper <sup>3</sup>			Stocks of Waste Paper, End of Mo. <sup>4</sup>		
			Capacity (Short tons)	Consumed	Per Cent of Capacity	Total	At plants	In transit and unshipped purchases
January	149,743	80,925	232,576	118,870	51.1	139,761	119,382	20,379
February	158,993	77,778	231,128	132,380	57.3	135,118	107,427	27,691
March	181,796	77,902	260,802	148,318	56.9	124,176	101,537	22,639
April	174,914	78,827	291,600	168,569	57.8	139,691	112,230	27,461
May	221,612	76,953	324,841	213,697	65.8	123,832	92,201	31,631
June	260,101	66,932	252,600	203,804	80.7	107,268	81,531	25,737
July	246,994	66,371	259,543	204,640	78.8	101,343	77,527	23,816
August	252,036	63,965	301,718	226,455	75.1	104,695	82,838	21,857
September	226,336	65,110	275,900	187,837	68.1	125,716	105,471	20,245
October	191,989	63,315	274,532	161,595	58.9	135,183	119,809	15,374
November	175,148	*70,263	271,572	145,307	53.5	167,430	137,287	30,143
December	152,712	70,288	268,371	121,703	45.3	171,222	150,645	20,577
Total (Year 1933)	2,392,374	-----	3,245,183	2,033,175	62.7	-----	-----	-----
Total (Year 1932)	2,160,093	-----	3,633,531	2,151,194	59.2	-----	-----	-----
Total (Year 1931)	2,544,301	-----	3,598,254	2,391,368	66.5	-----	-----	-----
Total (Year 1930)	2,692,498	-----	3,789,427	2,572,445	67.9	-----	-----	-----

<sup>1</sup>The corresponding operation data based on maximum trim width are:

	Rated capacity (Inch hours)	Operated (Inch hours)	Per cent		Rated capacity (Inch hours)	Operated (Inch hours)	Per cent
January	13,219,071	7,142,311	54.0	August	13,370,790	10,426,287	78.0
February	11,687,719	7,046,279	60.3	September	12,043,400	8,609,987	71.5
March	14,387,976	8,149,302	56.7	October	12,582,727	7,585,138	60.3
April	12,802,286	7,619,763	59.5	November	12,723,937	6,989,037	54.9
May	13,859,464	9,792,446	70.7	December	12,469,718	6,065,374	48.6
June	12,753,185	9,715,011	76.2				
July	12,038,260	9,528,048	79.1	Total (Year)	153,938,333	98,669,183	64.1

<sup>2</sup>As reported by 78 manufacturers that showed production of box board in tons for the respective months of 1933, as follows: January, 150,784; February, 156,002; March, 182,361; April, 175,785; May, 220,018; June, 250,014; July, 246,970; August, 251,634; September, 227,001; October, 190,194; November, 184,296; and December, 152,737.

<sup>3</sup>Revised to include data reported by 70 manufacturers.

<sup>4</sup>Revised.

Source: U. S. Department of Commerce. Monthly statistics of Box Board for 94 identical manufacturers compiled from data furnished by the National Paperboard Association and the American Paper and Pulp Association from reports of members, and by manufacturers reporting direct to the Bureau of the Census, are presented in the above table.

Rated (24-hour) capacity data of box-board machines in inch-hours for 1933 are based on last dryer width whereas those shown in reports published for earlier years were based on maximum trim width. Corresponding data on trim with basis for the months of 1933, appear in Note 1. The capacity data vary according to the normal number of working days in each month.

## BRITISH COLUMBIA

Wood Used in the Manufacture of Pulp  
By Kinds and Processes—1932

Kind of Wood—	Average Value		Quantity Wood Used in Each Process—		
	Quantity per cord	Dollars	Mechanical	Sulphite	or Kraft
Cords			Cords	Cords	Cords
Spruce & Balsam	136,825	\$8.86	103,165	30,082	3,578
Hemlock	155,137	7.17	40,965	109,475	4,697
Other Woods	12,223	8.29	18	807	11,398
Total	304,185	\$7.97	144,148	140,364	19,673
Totals, 1931	363,688	\$8.04	144,712	200,859	18,117
Totals, 1930	373,397	\$8.68	142,934	211,106	19,357

Source: Canadian Department of Trade and Commerce, Dominion Bureau of Statistics, Forest Products Branch.

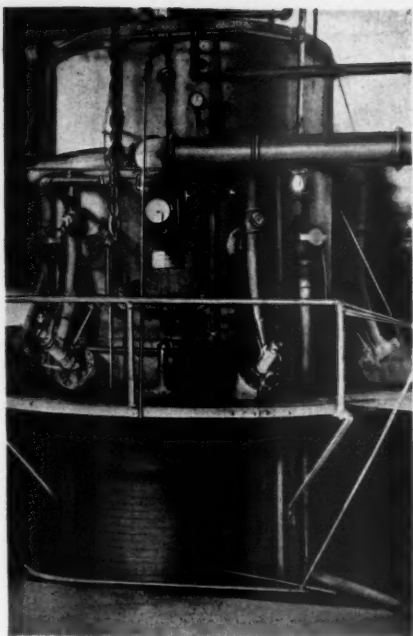
## BRITISH COLUMBIA

Principal Statistics of the Pulp and Paper Industry  
1931-1932

	1931	1932
Capital invested	\$52,256,905	\$51,102,837
Total number of employees	No. 2,553	2,330
Salaries and wages	\$ 4,005,088	\$ 3,015,228
Fuel and electricity used	\$ 877,189	607,798
Power employed	H.P. 132,766	133,050
Pulp-making materials	\$ 3,612,865	\$ 2,886,670
Pulp manufactured	\$ 6,948,124	4,911,874
Paper-making materials	\$ 5,019,500	3,956,089
Paper manufactured	\$12,182,112	9,636,283
Gross value of production	\$14,892,646	11,056,236
Net value of production	\$10,774,044	7,747,143

Source: Canadian Department of Trade and Commerce, Dominion Bureau of Statistics, Forest Products Branch.





## How Kraft Mills are saving money with **ROSS-HOOPER** WATER COOLED Smelter Bodies

Substantial saving in refractory costs.  
Elimination of shut-downs for repairs.  
Ample supply of hot water at 200° F.  
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Big reduction in maintenance charges.

The best proof of increased efficiency and economy secured with Ross Hooper Smelters is the fact that nearly all the original units have justified installation of additional units.

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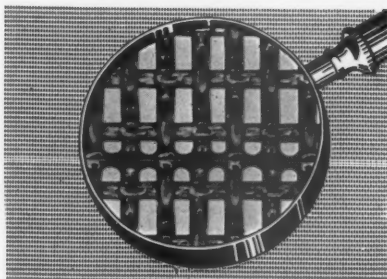
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Appleton Phosaloy Staggered Weave Fourdrinier Wires with the patented APP-WELD Seamless Joint have demonstrated that they do give low average



tonnage costs. The APP-WELD Seamless Joint is protected by U. S. Patent Nos. 1895605 and 1949593, others pending. Write for samples.

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PATENTED  
**SEAMLESS  
JOINT**

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APPLETON, WISCONSIN, U. S. A.

BRINGS ADDED LIFE TO **APPLETON PHOSALOY** FOURDRINIER WIRES

## PACIFIC PULP &amp; PAPER INDUSTRY

**CANADA**  
**Wood Pulp Exports**  
 (Tons of 2,000 lbs.)

Year—	Chemical Pulp		Mechanical Pulp		Total, All Pulp	
	Tons	Value	Tons	Value	Net Tons	Value
1933	476,358	\$20,666,614	132,151	\$ 2,688,023	608,509	\$23,354,637
1932	336,063	16,367,976	116,229	2,562,080	452,292	18,930,065
1931	457,435	25,450,476	165,096	4,606,167	622,531	30,056,643
1930	551,413	33,092,807	208,759	5,967,172	760,172	39,059,979
1929	626,378	37,670,383	209,331	5,906,638	835,709	43,577,021
1928	660,136	40,068,703	203,670	5,546,120	863,806	45,614,323
1927	618,324	39,234,577	260,831	7,761,464	879,155	46,996,011
1926	621,004	40,571,304	382,077	11,505,818	1,003,081	52,077,122
1925	599,466	37,358,632	360,265	10,573,273	959,671	47,931,905
1924	528,279	32,326,943	253,699	7,916,029	781,978	40,242,972
1923					875,358	37,027,496
1922					818,246	41,037,849
1921					527,222	33,133,675
1920					819,985	76,563,978
1919					709,134	37,184,764
1918					583,911	33,359,922

**CANADA**  
**PULP PRODUCTION**  
 (Tons of 2,000 lbs.)

	Mechanical Tons	Sulphite Tons	Sulphate Tons	Total Tons
1920	1,090,114	654,273	188,487	1,922,774
1921	931,560	476,929	131,337	1,539,826
1922	1,241,185	678,878	217,862	2,137,925
1923	1,449,106	749,668	224,812	2,413,586
1924	1,427,782	768,035	218,207	2,414,024
1925	1,621,917	842,785	242,207	2,706,909
1926	1,901,268	995,203	256,074	3,152,545
1927	1,922,124	1,016,060	262,512	3,200,696
1928	2,127,699	1,117,227	256,969	3,501,895
1929	2,420,774	1,236,232	250,104	3,907,110
1930	2,283,130	1,076,804	188,253	3,548,187
1931	2,016,480	941,586	145,156	3,103,222
1932	1,696,021	941,579	144,367	2,781,967
1933	1,950,000	1,025,000	155,000	3,130,000

**CANADA**  
**Value of Pulpwood Production**

Year	Pulpwood Used	Pulpwood Exported	Total Production
1921	\$ 38,283,262	\$14,617,610	\$ 52,900,872
1922	40,375,599	10,359,762	50,735,361
1923	43,594,592	13,525,004	57,119,596
1924	44,241,582	13,536,058	57,777,640
1925	48,012,602	14,168,935	62,181,537
1926	54,033,273	14,067,030	68,100,303
1927	54,582,190	15,702,705	70,284,895
1928	59,578,417	15,269,660	74,848,077
1929	63,101,138	13,314,738	76,415,876
1930	53,917,995	13,611,617	67,529,612
1931	42,098,327	9,874,916	51,973,243
1932	31,920,404	4,830,506	36,750,910

Source: Canadian Department of Trade and Commerce, Dominion Bureau of Statistics, Forest Products Branch.

**BRITISH COLUMBIA**

**Pulp and Paper Exports**

Loaded at Ocean Falls, Powell River, Swanson Bay, Port Alice, Woodfibre and Vancouver  
 (Compiled by Vancouver Merchants' Exchange)

Destination—	1925	1926	1927	1928	1929	1930	1931	1932	1933
Australia	2,115	13,950	18,226	14,550	21,480	15,940	11,835	15,314	14,685
Argentina				34,045		609	*	19,752	28,604
Central and South America	11,000			1,667	14,677	16,503	22,637	6,404	12,693
Canada (Eastern ports)		41,823			2,130	4,339	4,457	3,820	4,620
China			80	35	1,870	2,620	489	16,105	26,494
Japan	25,884		53,244	57,230	45,526	54,865	78,631	59,959	100,257
New Zealand	11,890	10,560	8,702	20,548	9,525	9,214	5,363	4,251	4,254
United Kingdom					1,728	621	9,047	486	347
United States	175,233	158,917	152,002	172,017	156,788	174,017	157,943	130,771	117,733
Other Countries			1,980	1,119	277	90	458	731	4,984
Total Short Tons	208,122	235,506	243,671	301,211	254,001	278,818	290,860	257,724†	314,671

\*Argentine shipments in 1931 are included under Central and South America.

†Includes 131 tons of paper shipped from New Westminster, destination not available.

# WASTE

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in YOUR mill ?

**SCREEN PLATES** show no wear after two years' operation. Nothing adheres to their smooth, polished surfaces. Fine slots improve paper quality without slowing up production. Slots do not clog and precision of slot dimensions is permanently maintained.

**SUCTION BOX COVERS** reduce wear of expensive wires and felts as much as 50%. Decreased friction, increased suction efficiency, lower operating costs—all result from use of patented CRODON-plated covers.

**PRESS ROLLS** are given a hard, smooth surface which prevents adherence of pulp and makes for easy cleaning, long life without regrinding, and low maintenance cost.

**CRODON**  
The Chrome Plate  
TRADE MARK REG. U. S. PAT. OFF.

CRODON not only prolongs useful life... it maintains new-equipment performance for extended periods, thus furthering economical and trouble-free production.

Many of the problems that confront operating departments can be answered in a single word—CRODON. There is no place in modern mills for production waste of whatever nature. New high standards demand elimination of unnecessary costs.

Chromium plate has demonstrated its adaptability. Its wide utilization is evidence of remarkable economies and trouble-free operation. It has the added recommendation of substantial repeat orders from the most progressive mills.

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American Pulp and Paper Mill

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## Europe, etc.

WOOD PULP PRODUCTION IN NORWAY,  
SWEDEN AND FINLAND

(Metric Tons)

	Mechanical	Sulphite		Sulphate
		Bleached	Unbleached	
<b>Norway</b>				
1929 .....	514,900	175,000	196,000	71,000
1930 .....	514,500	160,000	127,000	2,200
1931 .....	349,600	75,600	55,300	6,800(1)
1932 .....	482,071	198,142	163,865	55,871
1933 .....	448,300	330,000		56,300(1)
<b>Sweden</b>				
1929 .....	658,300	182,600	1,049,700	649,900
1930 .....	578,300	182,100	1,048,900	622,700
1931 .....	570,000	173,000	845,000	607,000
1932 .....	498,200	191,200	685,000	621,900
1933 .....				
<b>Finland</b>				
1929 .....	347,500	63,500	408,800	113,600
1930 .....	371,400	77,100	441,600	165,700
1931 .....	371,800	70,600	417,400	173,800
1932 .....	445,000	640,000		230,000
1933 .....	465,000	684,345		236,900

Metric ton equals 2,205 pounds.

(1) Preliminary figures.

Source: U. S. Dept. of Commerce.

EXPORTS OF PAPER AND BOARDS FROM  
FINLAND

(Metric Tons)

Class—	1931	1932	1933
<b>Paper, total</b> .....	276,371	288,692	310,334
Wrapping paper, coarse brown .....	34,167	33,313	52,287
Wrapping paper, other .....	17,008	17,245	
Greaseproof paper .....	473	402	403
Newsprint .....	190,880	200,948	225,496
Wall paper .....	3,336	1,133	
Writing paper .....	2,341	2,629	
Tissue paper .....	1,213	1,035	
Cigarette paper .....	273	380	
Other paper .....	26,680	31,607	32,148
<b>Boards, total</b> .....	47,495	56,419	59,988
<b>Paper and boards, total</b> .....	323,866	345,111	370,322

Metric tons equals 2,205 pounds.

Source: U. S. Dept. of Commerce.

## EXPORTS OF WOOD PULP FROM NORWAY

(Metric Tons)

Classes—	1931	1932	1933
<b>Mechanical Groundwood, Total</b> .....	517,902	609,046	588,249
Bleached, Dry .....	2,309	3,528	
Bleached, Wet .....	515,486	605,302	
Unbleached, Wet .....	107	216	
<b>Chemical Pulp, Total</b> .....	131,933	267,115	233,310
Sulphite, Unbleached, Dry .....	37,852	80,524	59,699
Sulphite, Bleached, Dry .....	79,539	152,410	156,359
Sulphite, Bleached or Unbleached Wet .....	515,486	605,302	
<b>Sulphate, Unbleached, Dry</b> .....	6,915	17,137	17,252

Metric tons equals 2,205 pounds.

Source: U. S. Dept. of Commerce.

## FINLAND

## Production

(Metric tons)

	1932	1933*
Mechanical groundwood .....	445,000	465,000
Sulphite pulp .....	639,219	684,345
Sulphate pulp .....	230,200	236,900
Paper .....	335,000	370,000
Boards .....	70,000	73,000
<b>Total</b> .....	1,719,419	1,829,245

Source: U. S. Dept. of Commerce.

\*Unofficial figures.

EXPORTS OF PAPER AND BOARDS FROM  
NORWAY

(Metric Tons)

Classes—	1931	1932	1933
<b>Total, Paper and Boards</b> .....	183,868	299,280	280,407
Wrapping Paper .....	15,493	25,972	70,897
Greaseproof .....	10,017	17,047	17,081
Newsprint .....	87,603	161,455	137,562
Other Paper .....	61,024	75,892	31,527
<b>Boards</b> .....	9,731	18,914	23,340

Metric tons equals 2,205 pounds.

## FINLAND

## Exports of Pulp, Paper, Board, Etc., 1930-1931-1932-1933

Metric Tons

Wood Pulp—	1930	1931	1932	1933
Mechanical (Total dry weight) .....	157,442	157,395	180,316	207,916
Sulphite .....	358,195	424,189	562,002	593,317
Sulphate .....	117,634	204,197	194,895	204,561
Cardboard .....	46,881	47,495	56,419	59,988
Newsprint .....	187,812	190,880	200,948	225,495
Other Papers .....	71,846	85,491	87,744	93,854
<b>Total value of pulp and paper exports (Fmk.)</b> .....	1,840,200,000	1,828,000,000	2,056,900,000	2,107,900,000
<b>Total value of pulp and paper imports (Fmk.)</b> .....	23,600,000	17,100,000	14,000,000	16,200,000

Source: The Finnish Paper &amp; Timber Journal and Bank of Finland Bulletin.





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# PAPER

## EXPORTS OF WOOD PULP FROM SWEDEN

(Metric Tons)				
Class—	1931	1932	1933	
Mechanical Pulp:				
Wet .....	457,288	378,105	312,373	
Dry .....	37,975	31,048		
Chemical Pulp:				
Sulphite, Bleached .....	150,915	151,121	204,872	
Sulphite, Unbleached, Wet .....	35,120	15,191	743,671	
Sulphite, Unbleached, Dry .....	618,586	490,369		
Sulphate, Bleached .....	84	1,924	22,661	
Sulphate, Unbleached, Wet .....	19,472	16,975	636,965	
Sulphate, Unbleached, Dry .....	503,655	410,338		
Total .....			1,920,541	

Amounts given in actual wet and dry weights.  
Source: U. S. Dept. of Commerce.

## EXPORTS OF PAPER AND BOARDS FROM SWEDEN

(Metric Tons)				
Classes—	1931	1932	1933	
Paper and Boards, Total .....	484,735	471,603	516,466	
Paper, Total .....	442,576	425,490	458,582	
Newsprint .....	183,111	185,428	182,950	
Coated .....	5,430	4,342	.....	
Kraft Wrapping .....	115,162	102,781	254,380	
Sulphite Wrapping .....	87,367	83,186		
Other Wrapping .....	16,127	18,499		
Greaseproof .....	24,445	19,253	14,591	
Book and Writing Papers .....	10,934	12,001	6,661	
Boards .....	42,159	46,113	57,884	

Metric tons equals 2,205 pounds.  
Source: U. S. Dept. of Commerce.

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GERMANY  
PAPER AND BOARD PRODUCTION

(Metric Tons)			
Year	Paper	Board	Total
1919 .....	792,000	163,000	955,000
1920 .....	1,108,000	239,000	1,347,000
1921 .....	1,212,000	261,000	1,473,000
1922 .....	1,582,000	383,000	1,965,000
1923 .....	1,185,000	234,000	1,419,000
1924 .....	1,377,000	277,000	1,654,000
1925 .....	1,692,000	366,000	2,058,000
1926 .....	1,668,000	329,000	1,997,000
1927 .....	2,008,000	434,000	2,442,000
1928 .....	2,105,000	442,000	2,547,000
1929 .....	2,126,000	430,000	2,556,000
1930 .....	1,969,000	405,000	2,374,000
1931 .....	1,824,000	347,000	2,171,000
1932 .....	1,639,000	330,000	1,969,000
1933 .....	1,729,000	329,000	2,058,000

Source: Wochenblatt fur Papierfabrikation.

GERMANY  
PULP PRODUCTION

(Metric Tons)			
Year	Chemical	Mechanical	Total
1913 .....	839,000	674,000	1,513,000
1926 .....	971,000	727,000	1,698,000
1929 .....	1,204,000	852,000	2,056,000
1930 .....	1,175,000	830,000	2,005,000
1931 .....	966,000	763,000	1,729,000
1932 .....	966,000	615,000	1,581,000
1933* .....	983,000	690,000	1,673,000

\*Estimated.

GERMANY  
PAPER PRODUCTION BY GRADES

(Metric Tons—2,205 lbs.)			
Grade—	1931	1932	1933
Newsprint .....	492,763	401,170	372,990
Packing Paper .....	207,282	192,342	212,492
Printing and Writing (with ground wood) .....	333,998	319,925	355,509
Printing and Writing (wood free) .....	133,566	121,534	138,349
Boards .....	347,082	329,592	328,705
All Other .....	656,704	603,451	650,390
Total .....	2,171,395	1,968,014	2,058,435

PULP AND PAPER EXPORTS  
All Grades

	Metric tons	Value (RM)
1932 .....	653,126	144,404,000
1933 .....	557,657	111,065,000

## AUSTRIAN PRODUCTION

	1931 Metric tons	1932 Metric tons	1933 Metric tons
Paper .....	210,060	200,950	200,530
Board .....	29,680	22,690	29,430
Chemical pulp .....	215,580	199,640	221,990
Mechanical pulp .....	96,080	83,410	89,830

### GERMANY PULP PRODUCTION BY GRADES

(Metric Tons)

Grade:	1932	1933*
Unbleached Sulphite .....	619,848	630,000
Bleached Sulphite .....	287,703	285,000
Unbleached Sulphate and Straw.....	58,924	68,000
<b>Total Chemical Pulp.....</b>	<b>966,475</b>	<b>983,000</b>
<b>Mechanical Pulp .....</b>	<b>614,916</b>	<b>690,000</b>
<b>Total, All Pulp.....</b>	<b>1,581,391</b>	<b>1,673,000</b>

\*Estimated.

### PAPER PRODUCTION IN RUSSIA

Paper production in Russia during 1933, according to figures published by the American-Russian Chamber of Commerce, totaled 500,000 metric tons, as against 471,000 tons in 1932. The 1933 figure includes 229,000 tons of printing and writing papers. Imports of paper and pulp during the two years mentioned were as follows:

	Metric Tons	
	1933	1932
Pulp .....	2,246	3,230
Paper and Board .....	599	293

### ITALY

#### Paper Production

1933 .....	Metric Tons 380,000
1925-1928 Average.....	Metric Tons 355,500

(Produced by 370 mills, of which 30 plants produce about 50 per cent of the entire output.)

### FRANCE

#### Pulp Imports

(Metric Tons)

	1932	1933
Mechanical (wet) .....	181,379	216,351
Chemical (dry) .....	541,526	580,775
Chemical (wet) .....	31,315	71,132

### Pulps Used in Different Papers

(By Percentages)

Kind of Paper—	Total	Mechanical	Sulphite	Sulphate	Soda	Other
		Wood Pulp				Pulps
Newsprint .....	100	80	20	—	—	—
Book .....	75	10	35	—	30	25
Writing .....	73	—	66	2	5	27
Wrapping .....	97	11	29	57	—	3
Boards .....	22	4	8	10	—	78
All Other .....	60	21	28	5	6	40

In conversion 7 per cent is added for pulp losses in paper manufacture. The percentages given above are average only, as the proportions vary somewhat in different mills.



PHOTO BY MARGARET BOURKE-WHITE FOR PRICE BROS., LTD., CANADA

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## CZECHOSLOVAKIA

## 1933 Production

(U. S. Dept. of Commerce Estimates)

	Metric Tons
Mechanical pulp .....	7,000
Sulphite pulp .....	180,000
Newsprint .....	34,500
Other paper .....	145,500

## Paper Exports

	Metric Tons	Value (Crowns)
1932 .....	39,782	93,241,000
1933 .....	32,664	65,087,000

## POLAND

## Paper Production

1932 .....	Metric Tons	115,738
1933 .....	Metric Tons	119,829

(28 mills; 21 in operation 1933).

## LITHUANIA

Exports of Chemical Pulp  
(all of production)

1929 .....	60,781 metric tons
1930 .....	53,898 metric tons
1931 .....	36,173 metric tons
1932 .....	39,384 metric tons

All pulp is exported.

## Orient

## JAPAN

## Paper Exports

Year—	Tons (Short)
1932 .....	77,092
1933 .....	93,843

(Approximately 70 per cent exported to Manchuria, Kwantung Leased Territory and China).

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A young man of ability and aggressiveness, with full knowledge of all lines of paper. Must be well acquainted with all trade in Northern California. When answering state experience, salary and references.

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**JAPAN  
PULP PRODUCTION**  
(Long Tons)

Year—	Total
1923 .....	357,084
1930 .....	625,537
1931 .....	566,709
1932 .....	551,120
1933 .....	683,462

Production by Type		
	1932	1933
Mechanical .....	241,746	310,581
Chemical .....	309,374	372,881

**IMPORTS OF WOOD PULP INTO JAPAN**  
(Short Tons; Dry Weight)

	1932	1933
United Kingdom .....	1,037	.....
Germany .....	7,992	3,720
Sweden .....	18,014	29,061
Norway .....	24,162	34,851
United States .....	24,746	49,924
Canada .....	30,113	52,115
Other countries .....	7,151	9,352
<b>Total .....</b>	<b>113,215</b>	<b>179,023</b>

Source: Monthly Return of Foreign Trade of Japan, December, 1933.

**JAPANESE PRODUCTION OF FOREIGN STYLE  
PAPER**

	1932 Pounds	1933 Pounds
Best Grade Printing Paper..	132,898,632	135,943,834
Ordinary Printing Paper.....	116,845,453	135,724,547
Writing and Drawing Paper ..	33,553,206	45,744,697
Imitation Paper .....	99,507,988	92,198,539
Art Paper .....	12,331,239	16,506,872
Newsprint .....	543,572,397	608,621,925
Roll "Hanshi" .....	58,846,686	41,190,194
Colored Paper .....	16,881,990	16,819,607
Wrapping Paper .....	157,888,360	200,236,986
Japanese Paper .....	17,416,193	23,635,070
Cardboard .....	77,551,099	76,715,541
Miscellaneous .....	44,021,967	47,767,116
<b>Total .....</b>	<b>1,311,315,210</b>	<b>1,444,104,928</b>

## Chemical Engineer—

graduated, with 10 years of experience from Scandinavian and American sulphite, soda and paper-mills desires position as assistant manager or technical superintendent. At present employed. 33 years of age, married.

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# PAPER DYES



### TRADE ESTIMATES OF WORLD RAYON PRODUCTION, CONSUMPTION AND FOREIGN TRADE

#### World Rayon Production Estimates—Thousand Pounds

	1933	1932	1931	1930
United States	207,580	134,815	150,880	126,805
Japan	89,925	65,475	46,515	34,835
Great Britain	83,510	69,445	54,015	49,825
Italy	80,040	70,215	75,510	63,490
Germany	73,750	64,100	60,040	57,860
France	56,335	47,260	37,700	42,990
Austria	1,450	880		1,430
Belgium	9,485	10,030	9,920	11,685
Czechoslovakia	5,500	5,655	4,840	4,400
Netherlands	23,510	18,300	19,840	17,195
Poland	7,020	7,260	5,225	5,280
Switzerland	11,635	10,915	9,900	10,360
Canada	7,610	7,115	5,565	5,390
Others	5,920	5,290	5,055	4,610
<b>Total</b>	<b>663,270</b>	<b>516,755</b>	<b>485,005</b>	<b>436,155</b>

Sources: Nos. 1, 2 and 3 (See footnote at end).

#### World Rayon Yarn Output by Processes—Percentages

	1933	1932	1931	1930
Viscose	88.4	88.3	89.0	83.6
Acetate	7.8	7.5	7.5	9.0
Cuprammonium	3.2	3.5	2.6	5.2
Nitrocellulose	0.6	0.7	0.9	2.2
<b>Total</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>

Source: No. 3.

#### World Rayon Yarn Consumption Estimates—Thousand Pounds

	1933	1932	1931	1930
United States	206,775	152,180	157,360	117,195
Japan	78,045	63,490	42,440	30,645
Great Britain	67,900	61,510	42,990	42,330
Germany	81,020	65,475	62,170	58,425
Italy	33,180	25,355	20,725	27,335
France	40,125	25,355	24,140	30,425
Netherlands	3,635	2,645	2,425	3,085
Switzerland	7,495	6,395	4,740	5,070
Belgium	5,070	4,960	5,180	5,290
All others	105,270	89,285	82,455	87,305
<b>Total</b>	<b>628,515</b>	<b>496,650</b>	<b>444,625</b>	<b>407,105</b>

Sources: Nos. 1 and 3.

#### World Rayon Export Estimates—Thousand Pounds

From—	1933	1932	1931	1930
United States	1,110	655	315	345
Japan	9,350	7,920	2,750	3,190
Great Britain	6,600	6,735	4,665	6,380
Germany	16,610	14,520	13,200	15,310
Italy	33,550	36,700	45,695	41,360
France	18,480	14,080	16,655	17,470
Netherlands	15,995	15,030	19,995	20,285
Switzerland	9,415	8,030	9,910	9,285
Belgium	5,920	5,765	6,250	6,670
All others	5,390	6,380	6,050	6,160
<b>Total</b>	<b>122,420</b>	<b>115,815</b>	<b>125,485</b>	<b>126,455</b>

Sources: Nos. 2 and 3.

#### World Rayon Import Estimates—Thousand Pounds

Into—	1933	1932	1931	1930
United States	1,205	165	1,530	5,810
Japan	845	420	1,420	880
Great Britain	2,300	2,115	1,420	590
Germany	23,210	21,890	25,190	25,740
Italy	230	205	330	285
France	770	990	1,320	660
Netherlands	2,025	1,650	1,980	2,245
Switzerland	5,545	5,390	5,610	4,180
Belgium	2,310	1,210	1,540	1,650
<b>Total</b>	<b>40,635</b>	<b>36,145</b>	<b>43,010</b>	<b>42,815</b>

Sources: Nos. 2 and 3.

Sources: No. 1—Textile Organon. No. 2—Silk and Rayon. No. 3—Silk Journal and Rayon World.